TM 11-6625-2414-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DS, GS AND DEPOT MAINTENANCE MANUAL

TEST FACILITIES KIT MK-1191/AR

HEADQUARTERS, DEPARTMENT OF THE ARMY

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TECHNICAL MANUAL
No. 11-6625-2414-15

HEADQUARTERS
DEPARTMENT OF THE ARMY
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Operator's, Organizational, DS, GS, and Depot Maintenance Manual

TEST FACILITIES KIT MX-1191/AR

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual describes Test Facilities Kit MK-1191/AR (fig. 1-1, 1-2) and provides instructions for installation, operation and maintenance. Included are instructions for use under usual conditions, cleaning and inspection of the equipment, and replacement of parts available to the operator and organizational repairmen.

b. Three appendices are included in this manual:

(1) Appendix A, References.

(2) Appendix B, Basic issue items list.

(3) Appendix C, Maintenance allocation chart.

1-2. Indexes of Equipment Publications

a. DA Pam 310-4. Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

1-3. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Use equipment forms and records in accordance with instructions in TM 38-750.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR700-58 (Army), NAVSANDA Publication 378 (Navy) and AFR71-4 (Air Force).

c. Reporting of Equipment Publication Improvements. The reporting of errors, omissions and recommendations for improving this publication by the individual user, is encouraged. DA Form 2028 (Recommended Changes to Publications) will be completed by the individual using the manual and forwarded direct to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-ME-NMP-EM Fort Monmouth, N. J. 07703.

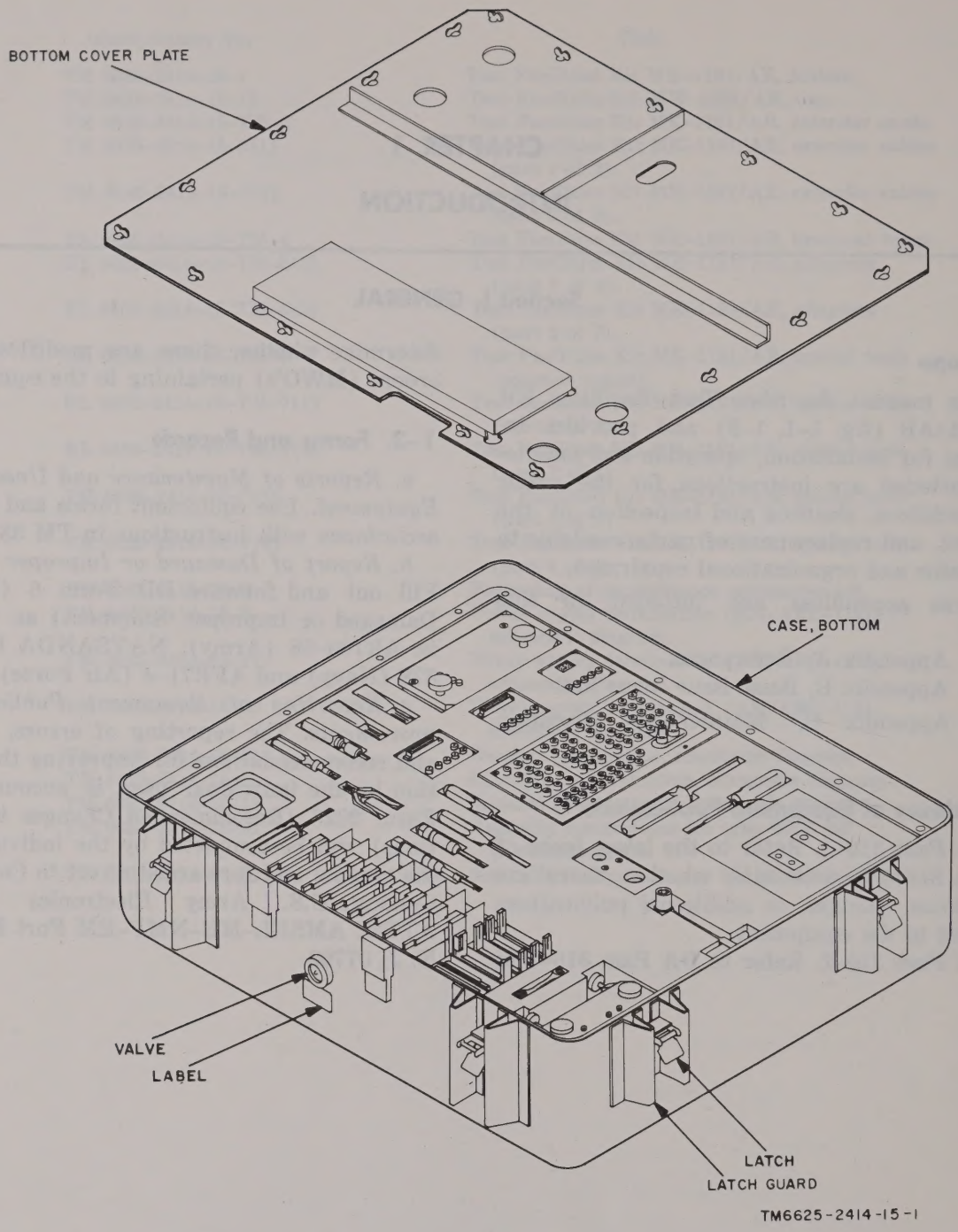


Figure 1-1. Test Facilities Kit MK-1191/AR, bottom.

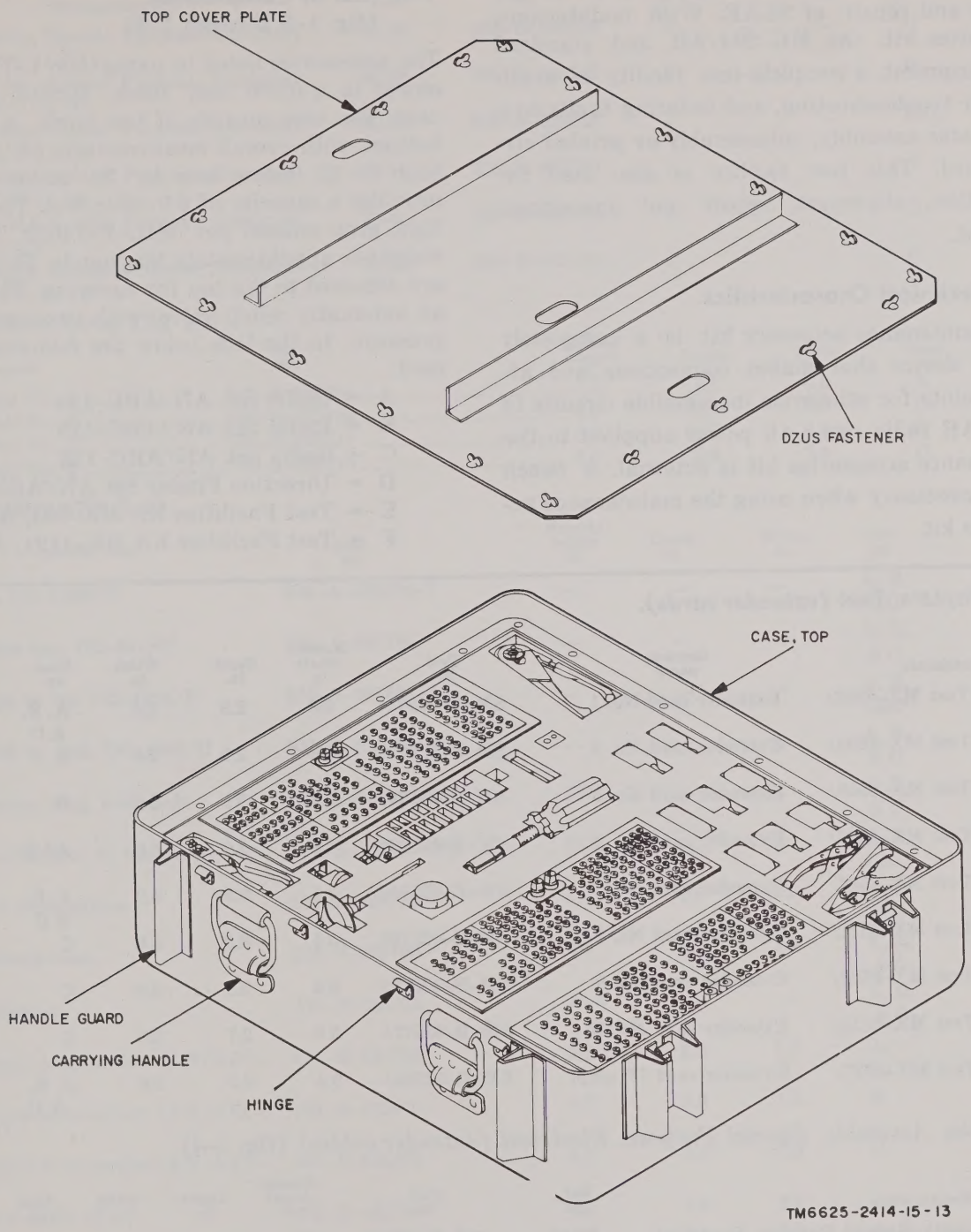


Figure 1-2. Test Facilities Kit MK-1191/AR, top.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

a. Purpose. The Test Facilities Kit MK-1191/AR (maintenance accessories kit) is a test accessories kit which provides extender cards, extender cables, breakout boxes, adapters, and special tools to be used as needed when testing Standard Lightweight Avionics Equipment (SLAE). Radio Sets AN/ARC-114, AN/ARC-115, and AN/ARC-116.

b. Use. The maintenance accessories kit is used in conjunction with the Test Facilities Kit

MK-994/AR at the general support area in the testing and repair of SLAE. With maintenance accessories kit, the MK-994/AR and standard test equipment, a complete test facility is available for troubleshooting, and isolating faults to a replaceable assembly, subassembly or printed circuit card. This test facility is also used for calibration, alignment, repair and operational checkout.

1-5. Technical Characteristics

The maintenance accessory kit is a completely passive device that makes connections and affords points for otherwise inaccessible circuits in the SLAE radio sets. All power supplied to the maintenance accessories kit is external. A bench area is necessary when using the maintenance accessories kit.

1-6. List of Components (fig. 1-3 through 1-8)

The accessories listed in paragraph 1-7 below are stored in a 0.090 inch thick, 5052-0 aluminum case. The case consists of two parts, a top and a bottom, with overall measurements of 13 inches high by 25 inches deep by 32 inches wide and provides a capacity of 6.0 cubic feet. The finish is light gray enamel per MIL-F-14072. The total weight is approximately 90 pounds. Four handles are attached to the top for carrying. The lock is an automatic relief valve with two-way vacuum pressure. In the lists below the following code is used:

A = Radio Set AN/ARC-114
B = Radio Set AN/ARC-115
C = Radio Set AN/ARC-116
D = Direction Finder Set AN/ARN-89
E = Test Facilities Kit MK-994/AR
F = Test Facilities Kit MK-1191/AR

a. Adapters, Test (extender cards).

Nomenclature	Common name	Part No.	Height/ length in.	Depth in.	Width in.	Used on	Fig. No.
Adapter, Test MX-8503/AR	Extender card No. 1	SM-B-625754	0.6	2.9	2.6	A, B, & C	1-3
Adapter, Test MX-8504/AR	Extender card No. 3	SM-B-625758	0.6	2.9	2.6	A	1-3
Adapter, Test MX-8505/AR	Extender card No. 5	SM-B-625762	0.6	2.9	5.0	B	1-3
Adapter, Test MX-8506/AR	Extender card No. 6	SM-B-625764	0.6	2.9	5.0	A&B	1-3
Adapter, Test MX-8507/AR	Extender card No. 7	SM-B-625766	0.6	2.9	5.0	A, B, & C	1-3
Adapter, Test MX-8511/AR	Extender card No. 8	SM-B-625768	0.6	2.9	5.0	C	1-3
Adapter, Test MX-8508/AR	Extender card No. 9	SM-B-625770	0.6	2.9	5.0	C	1-3
Adapter, Test MX-8510/AR	Extender card No. 10	SM-B-625774	0.6	2.7	2.6	C	1-3
Adapter, Test MX-8527/AR	Extender card IF ampl	SM-B-625891	0.6	2.9	2.6	A, B, & C	1-3

b. Cables Assembly, Special Purpose, Electrical (extender cables) (fig. 1-4).

Nomenclature	Ref Des	Part No.	Height/ length ft	Depth in.	Width in.	Used on	Fig. No.
Cable Assembly, Special Purpose, Electrical CX-12182/U (1 FT)	W102	SM-B-625721	1	--	--	A	1-4(1)
Cable Assembly, Special Purpose, Electrical CX-12183/U (1 FT)	W103	SM-B-625724	1	--	--	A	1-4(2)
Cable Assembly, Special Purpose, Electrical CX-12184/U (1 ft)	W104	SM-B-625727	1	--	--	A	1-4(1)
Cable Assembly, Special Purpose, Electrical CX-12185/U (1 ft)	W105	SM-B-625730	1	--	--	A	1-4(1)
Cable Assembly, Special Purpose, Electrical CX-12186/U (1 ft)	W106	SM-B-625733	1	--	--	A	1-4(1)
Cable Assembly, Special Purpose, Electrical CG-3475/U (6 ft)	W1	SM-B-625562	6	--	--	A	1-4(2)
Cable Assembly, Special Purpose, Electrical CX-12187/U (1 ft)	W107	SM-B-625736	1	--	--	B	1-4(2)

Nomenclature	Ref Des	Part No.	Height length ft	Depth in.	Width in.	Used on	Fig. No.
Cable Assembly, Special Purpose, Electrical CX-12188/U (1 ft)	W108	SM-B-625739	1	--	--	B	1-4(1)
Cable Assembly, Special Purpose, Electrical CX-12189/U (1 ft)	W109	SM-B-625742	1	--	--	B	1-4(2)
Cable Assembly, Special Purpose, Electrical CX-12190/U (1 ft)	W110	SM-B-625745	1	--	--	B&C	1-4(1)
Cable Assembly, Special Purpose, Electrical CX-12191/U (1 ft)	W111	SM-B-625748	1	--	--	C	1-4(2)
Cable Assembly, Special Purpose, Electrical CX-10894/AR	W26	SM-B-625644	1	--	--	C	1-4(2)
Cable Assembly, Special Purpose, Electrical CX-12192/U (1 ft)	W112	SM-B-625751	1	--	--	C	1-4(2)

c. Breakout boxes (fig 1-5).

Generic name	Part No.	Height/ length in.	Depth in.	Width in.	Used on	Fig. No.
Breakout box No. 1	SM-B-625701	3.0	14.5	6.0	A	1-5
Breakout box No. 2	SM-B-625706	3.0	14.5	6.0	B	1-5
Breakout box No. 3	SM-B-625711	3.0	14.5	6.0	C	1-5
Breakout box No. 4	SM-B-625716	2.0	5.0	7.0	D	1-5

d. Adapters (fig 1-6).

Generic name	Part No.	Height/ length in.	Depth in.	Width in.	Used on	Fig. No.
Conhex tee UG-1893/U	SM-A-595804-7	--	--	--	A, B, & C	1-6(1)
Adapter jack bnc, UG-914/U	SM-A-625784	--	--	--	A, B, & C	1-6(1)
Adapter, tps to bnc UG-1894/U	SM-A-595805-3	--	--	--	A, B, C&D	1-6(1)
Conhex, jack to jack UG-1895/U	SM-A-595804-8	--	--	--	A, B, & C	1-6(1)
Double banana plug, both ends	SM-A-625787-136	36.0	--	--	A, B, & C	1-6(1)
Double banana plug to bnc male	SM-B-625787-236	36.0	--	--	A, B, C&D	1-6(1)
Microphone termination	SM-B-625789	2.0	2.0	1.0	A, B, & C	1-6(2)
Headset termination	SM-B-625790	2.0	2.0	1.0	A, B, & C	1-6(2)
Headset adapter	SM-B-625791	36.0	--	--	A, B, & C	1-6(1)
Power supply termination (AN/ARC-114)	SM-B-625792	3.0	3.0	1.0	A	1-6(2)
Power supply termination (AN/ARC-115)	SM-B-625877	3.0	3.0	1.0	B	1-6(2)
Power supply termination (AN/ARC-116)	SM-B-625879	3.0	3.0	1.0	C	1-6(2)
Shield (59.9-MHz IF)	SM-B-625795	3.1	0.5	2.9	C	1-6(1)
Sierra attenuator	SM-A-625793	8.0	2.5	2.3	A, B, C&D	1-6(2)

e. Special tools (fig. 1-7)

Generic name	Part No.	Used on	Fig. No.	Generic name	Part No.	Used on	Fig. No.
Tool, Crimp, 612118	SM-A-625812	A, B, & C	1-7	Tool, Insertion, 294-123	SM-A-625815	A, B, & C	1-7
Tool, Crimp, MS3191-1	MS3191-1	D	1-7	Tool, Extractor, 294-205	SM-A-625816	A, B, & C	1-7
Adapter, Crimp, 612516	SM-A-625813-2	A, B, & C	1-7	Tool, Insertion, CIT 16	SM-A-625817-3	E	1-7
Adapter, Crimp, 612517	SM-A-625813-1	A, B, & C	1-7	Tool, Insertion, CIT 20	SM-A-625817-4	E	1-7

Generic name	Part No.	Used on	Fig. No.
Tool, Extractor, CET 16	SM-A-625817-1	E	1-7
Tool, Extractor, CET 20	SM-A-625817-2	E	1-7
Tool, Extractor/ Insertion, CIET-20HDB	----	F	-
Tool, Positioner, P-20-3191-37	----	F	1-7

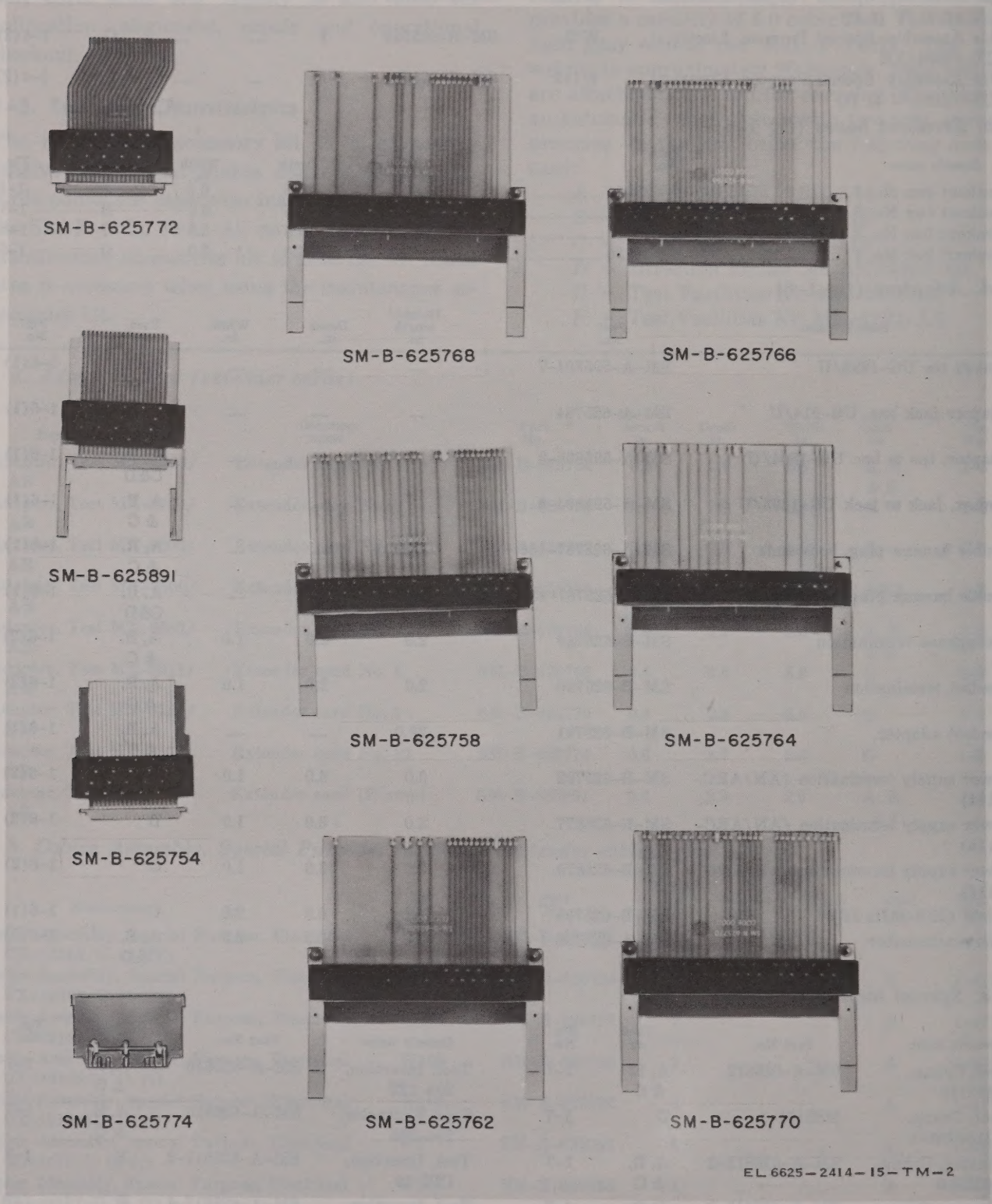


Figure 1-3. Test Facilities Kit MK-1191/AR, extender cards.

f. Special tools (fig. 1–8).

Generic name	Part No.	Used on	Fig. No.
Wrench 5/16 open end	SM–C–625796	A&B	1–8(4)
Support and drill fixture (AN/ARC–114)	SM–B–625806	A	1–8(1)
Drill, twist, 1/16	SM–A–625863	A&B	1–8(4)
Drill, twist, 3/64	SM–A–625799	A	1–8(4)
Driver, thinwall	SM–A–62580	C	1–8(2)
Wrench, knurled socket, 36KB515	SM–A–625801	B&C	1–8(2)
Fixture, actuator positioning	SM–B–625802	A	1–8(2)
Feeler gage 0.003	SM–B–625803	A	1–8(4)
Feeler gage 0.020	SM–C–625804	A	1–8(4)
Support and drill fixture (AN/ARC–115)	SM–B–625797	B	1–8(1)
Wrench, torque	SM–B–625807	A, B, & C	1–8(2)
Wrench, torque, 12 oz in.	SM–B–625808	A	1–8(2)
Pliers, retaining ring	SM–B–625810	A, B, & C	1–8(2)
Screw, set	70A8300203–210	A&B	1–8(4)
Installation tool, crescent ring 0120	SM–C–625811–12	A, B, & C	1–8(2)
Installation tool, crescent ring 0180	SM–C–694326	A, B, & C	1–8(3)
Removal tool, crescent ring 0120	SM–D–625870–1	A, B, & C	1–8(4)
Removal tool, crescent ring 0180	SM–D–625870–2	A, B, & C	1–8(4)
Puller, gear	SM–C–625850	A	1–8(4)
Insertion tool, pin, 0.046	SM–D–625851–1	A&B	1–8(3)
Installation tool, pin, 0.046	SM–D–625851–2	A&B	1–8(3)
Installation tool, sprocket pin, 0.046	SM–D–625851–3	A&B	1–8(3)
Removal tool, pin, 0.046	SM–D–625851–4	A&B	1–8(3)
Fixture, number alignment (AN/ARC–114)	SM–B–625853	A	1–8(2)
Fixture, number alignment (AN/ARC–115)	SM–B–625860	B	1–8(2)
Installation tool, sprocket	SM–B–625855	A	1–8(2)
Drift pin, gear aligning	SM–B–625856	A	1–8(4)
Fixture, electrical equipment (AN/ARC–114)	SM–B–625857	A	1–8(1)
Fixture, electrical equipment (AN/ARC–115)	SM–B–625861	B	1–8(1)
Wrench, open-end box, 7/16 –3/8 modified	SM–B–625862	A	1–8(4)
Insertion tool, pin, 0.062	SM–D–625869–1	A	1–8(3)
Installation tool, pin, 0.062	SM–D–625869–2	A	1–8(3)
Removal tool, pin, 0.062	SM–D–625869–3	A	1–8(3)
Installation tool, drive pin	SM–D–625854	A	1–8(2)
Removal tool, drive pin	SM–B–625873	A	1–8(2)

1–7. Description of Equipment (fig. 1–1, 1–2)

The maintenance accessories kit contains extender cards, extender cables, breakout boxes, adapters and special tools housed in a lightweight transit case (fig. 1–1, 1–2). This kit supplies the accessories necessary to fault isolate the Radio Sets AN/ARC–114, AN/ARC–115, AN/ARC–116 and Direction Finder Set AN/ARN–89. The transit case contains suitable compartments or holding features to protect the contents from damage.

1–8. Description of Transit Case and Minor Components

The maintenance accessories kit components are housed in a lightweight aluminum transit case with two handles, one on each end. There are four latches on each of the two sides. Unfastening the latches allows the case to be separated into two parts. Components are stored safely in each of the halves. The minor components of the maintenance accessories kit are shown in figures 1–3 through 1–8.

a. Extender Cards. The extender cards are of heavy duty construction and supports for radio set cards are provided where required. Extender card monitoring points are numbered.

b. Extender Cables. All extender cables except W1 and W26 are rubber-insulated cables with multipin potted amphenol connectors. The potting provides adequate protection yet does not hinder use. Extender cables W1 and W26 are identical to those in Test Facilities Kit MK–994/AR.

c. Breakout Boxes. The four breakout boxes consist of aluminum boxes painted light gray per MIL–F–14072. The top contains a set of test points, one for each male/female connector on the radio sets and direction finder set. A set of connectors is mounted on the rear of each box and serves as the male/female interface from radio sets and direction finder set to the test field on the box. Each set of test points is color coded.

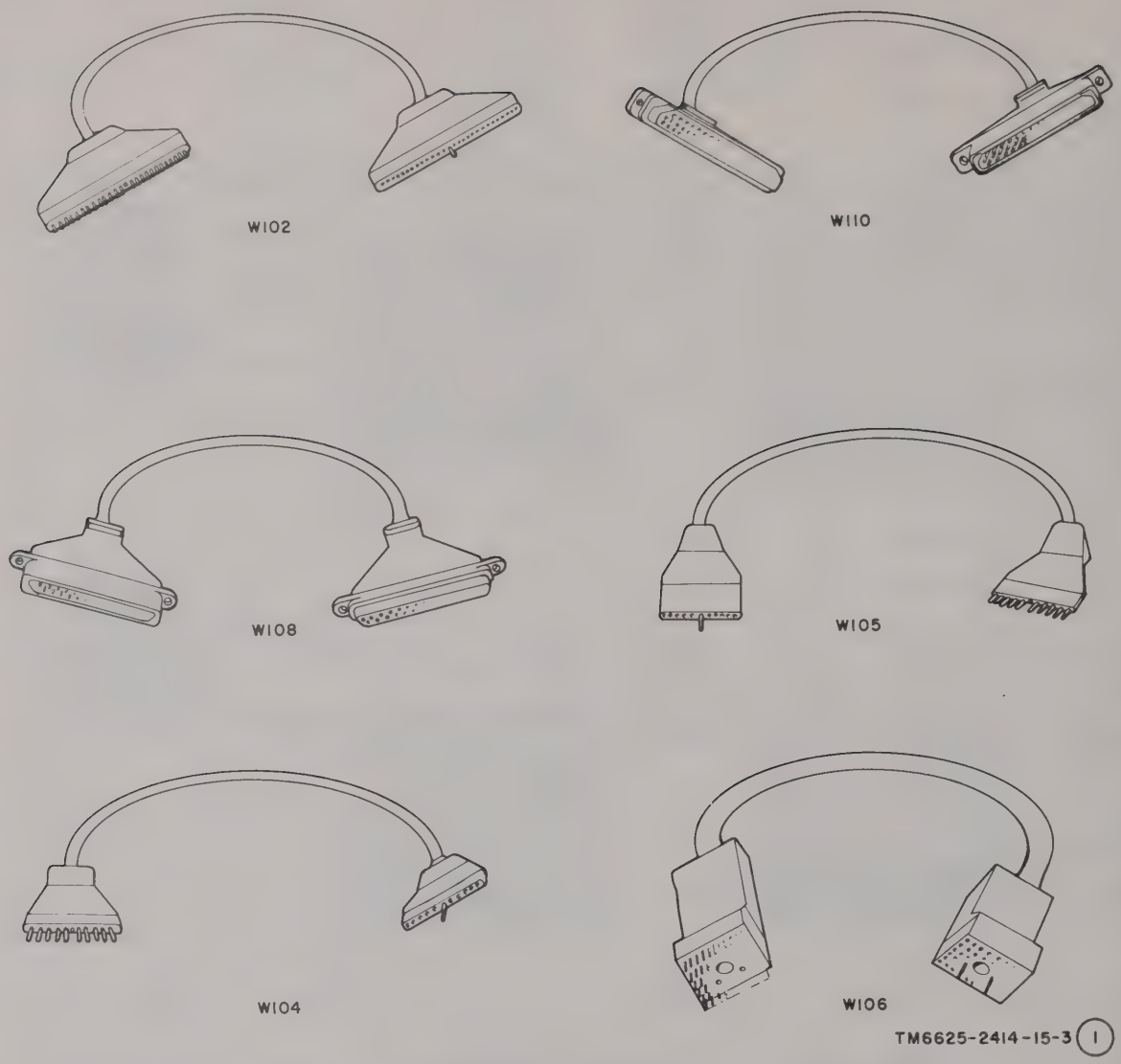
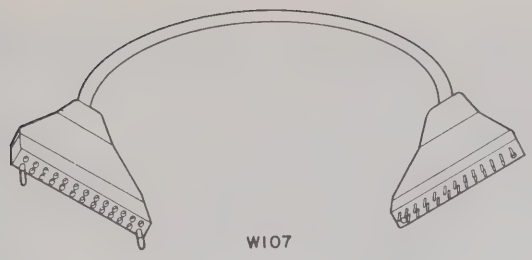
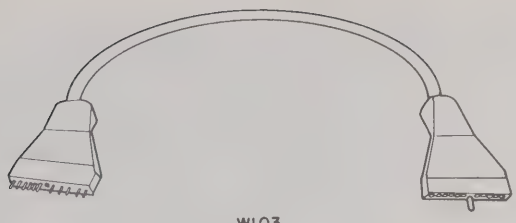


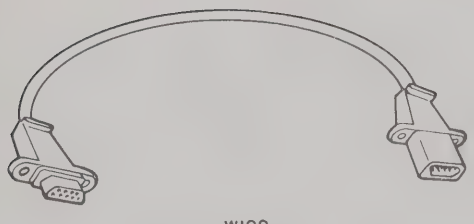
Figure 1-4(1). Test Facilities Kit MK-1191/AR, extender cables (part 1 of 2).

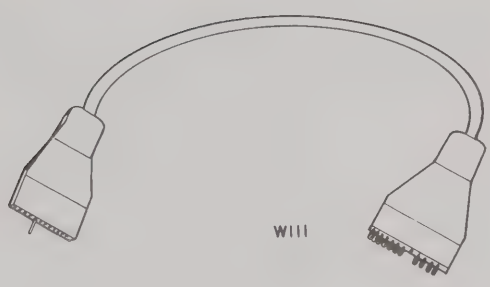
d. Special Tools (common usage). The special common usage tools consist of two crimping tools, two crimp adapters, three insertion tools, three removal tools, one positioner and one insertion/extractor tool. All are commercially purchased parts to military specifications. Lubricants for the crimping tools are given in paragraph 3-9.

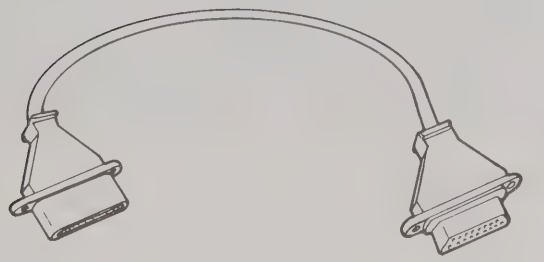
e. Special Tools. Special purpose tools and fixtures are provided, both commercial and those specially manufactured, to military specifications. Tools or components made of tool steel are black oxidized per MIL-C-13924, class 1 and aluminum tools or components are anodized per MIL-A-8625, class 2, colored black.

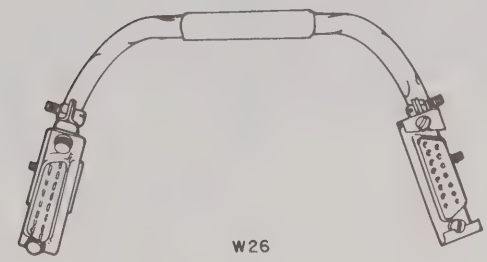


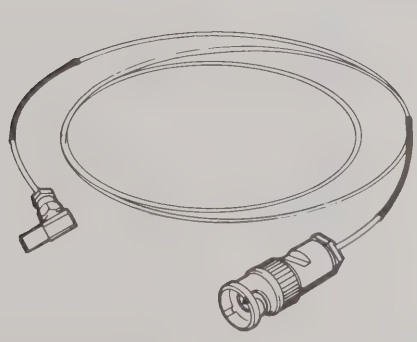












TM6625-2414-15-3 (2)

Figure 1–4(2). Test Facilities Kit MK–1191/AR, extender cables (part 2 of 2).

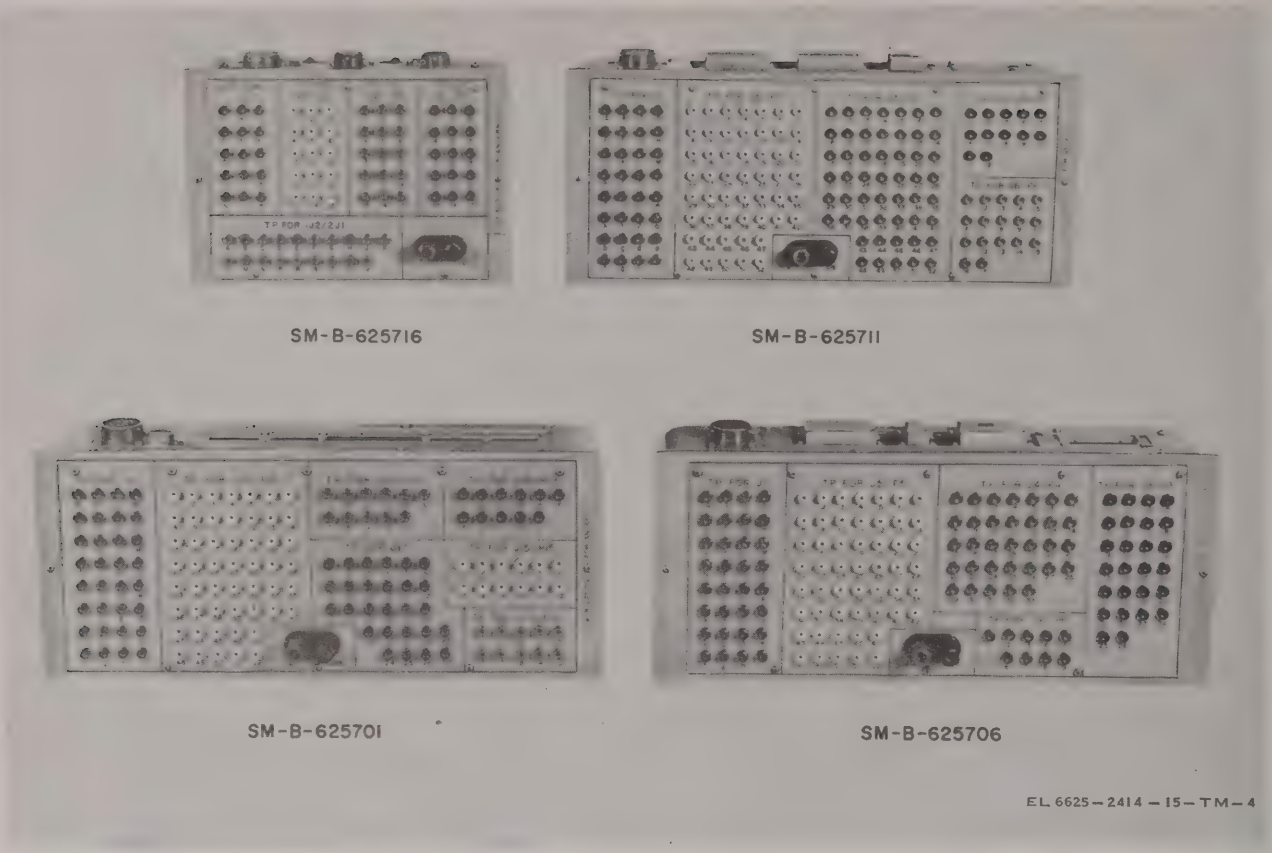


Figure 1-5. Test Facilities Kit MK-1191/AR, breakout boxes.

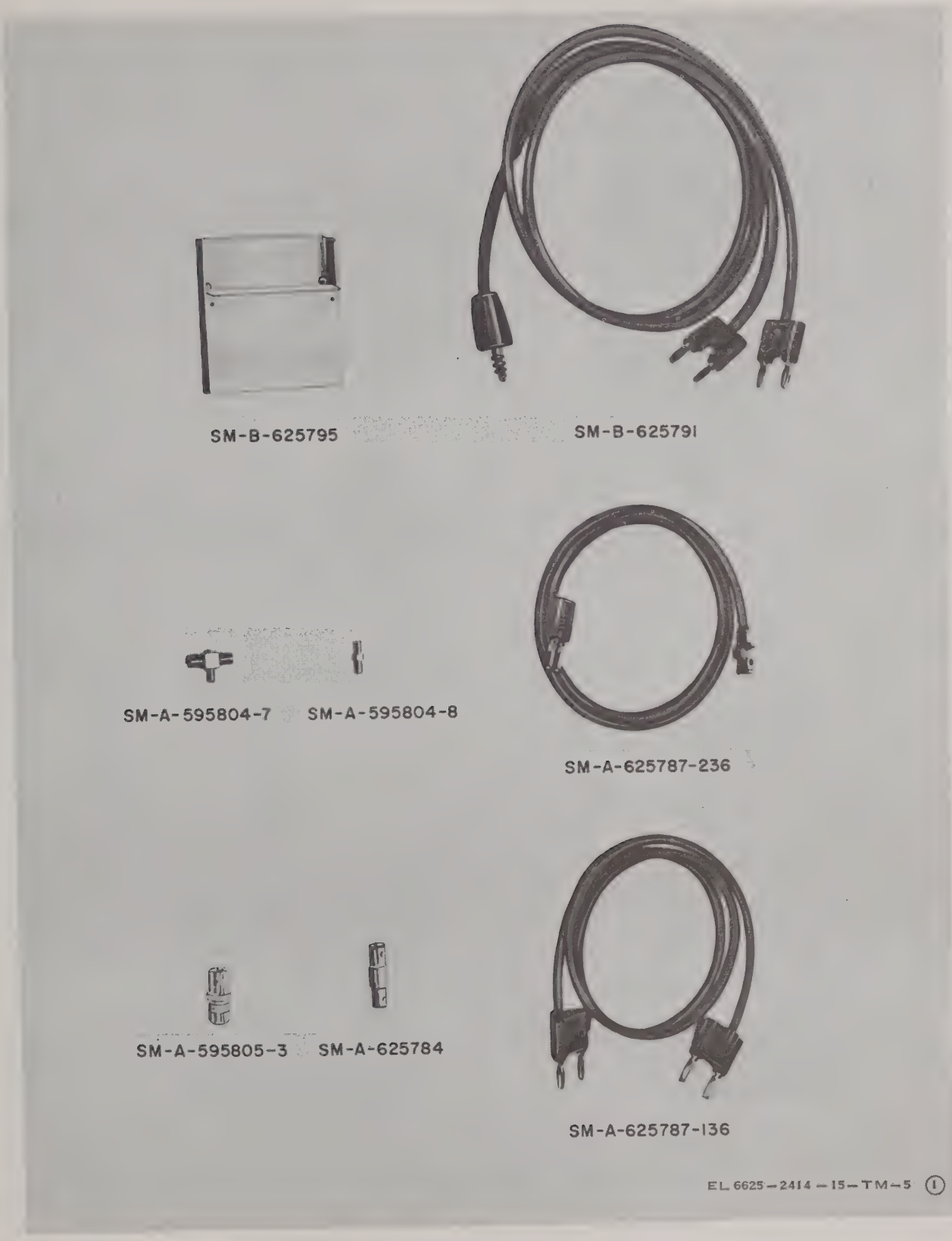
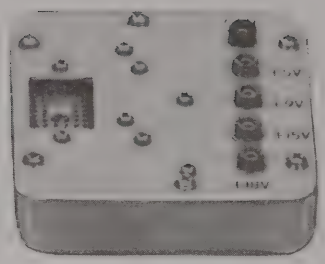
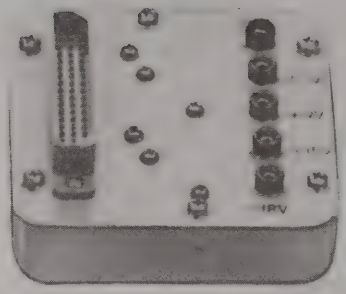


Figure 1-6(1). Test Facilities Kit MK-1191/AR, adapters (part 1 of 2).

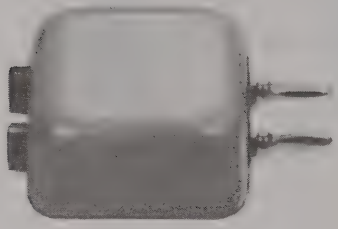
SM-A-625793



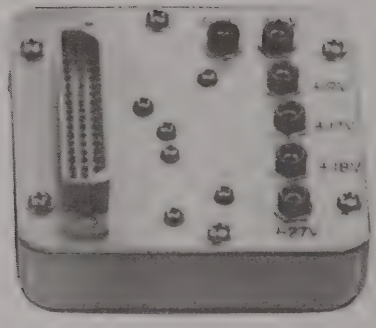
SM-B-625792



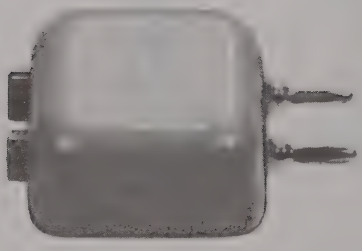
SM-B-625877



SM-B-625789



SM-B-625879



SM-B-625790

EL 6625–2414–15–TM–5 (2)

Figure 1–6(2). Test Facilities Kit MK–1191/AR, adapters (part 2 of 2).

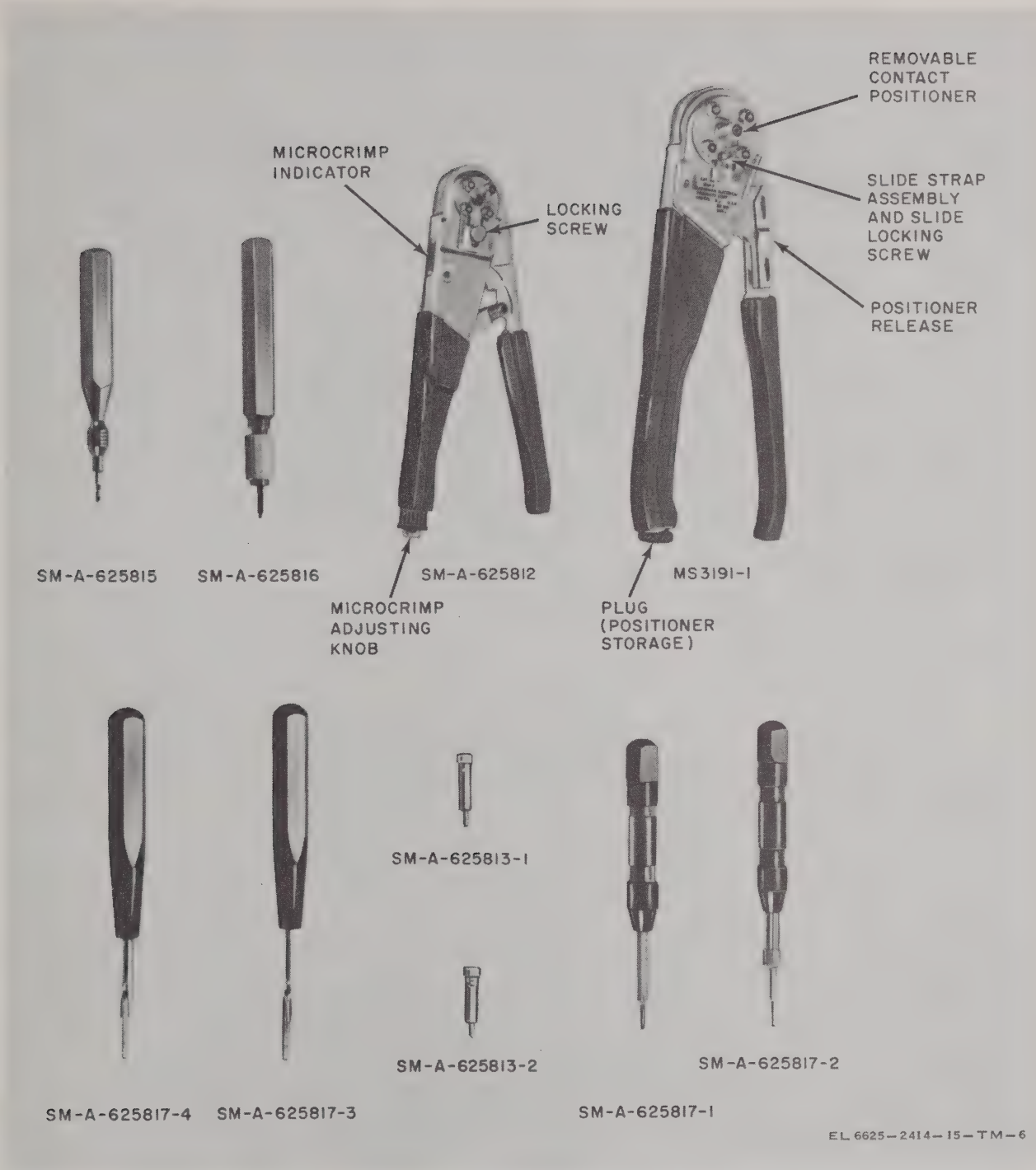


Figure 1–7. Test Facilities Kit MK–1191/AR, special tools (common usage).

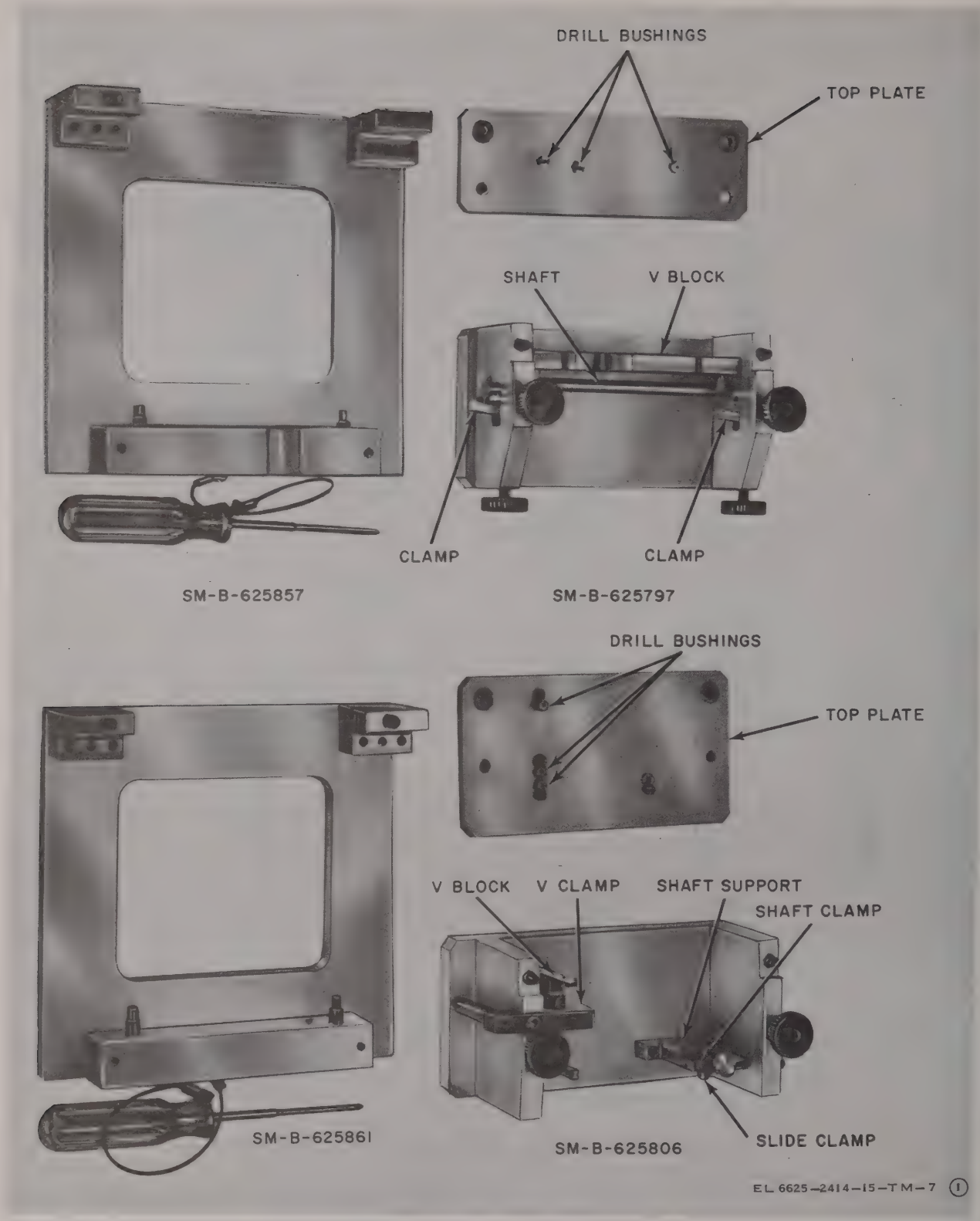


Figure 1-8(1). Test Facilities Kit MK-1191/AR, special tools, (part 1 of 4).

Figure 1–8(2). Test Facilities Kit MK–1191/AR, special tools (part 2 of 4).

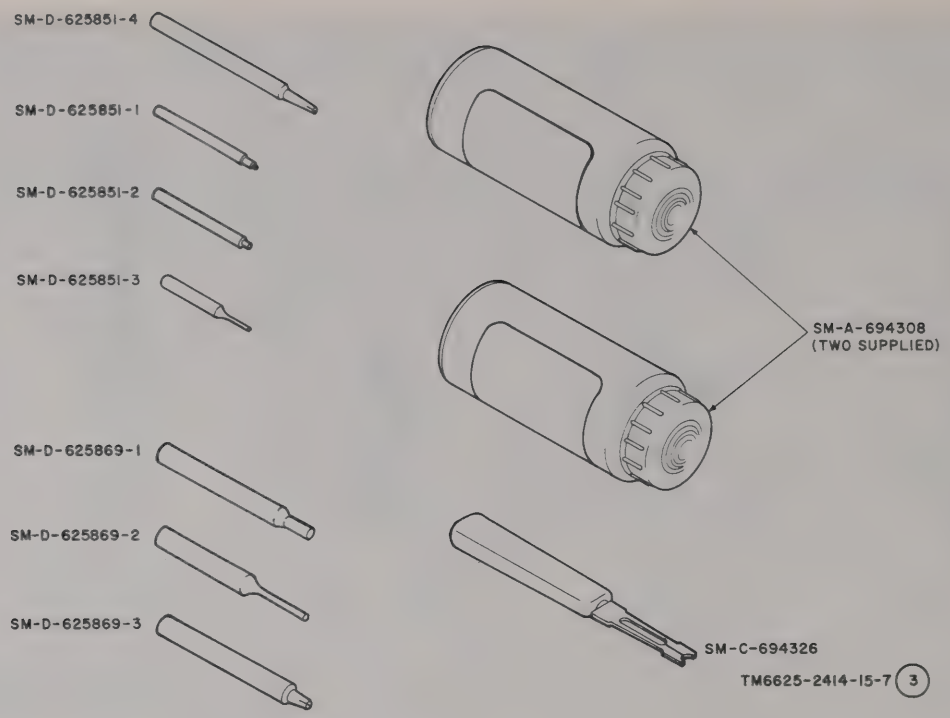


Figure 1–8(3). Test Facilities Kit MK–1191/AR, special tools (part 3 of 4).

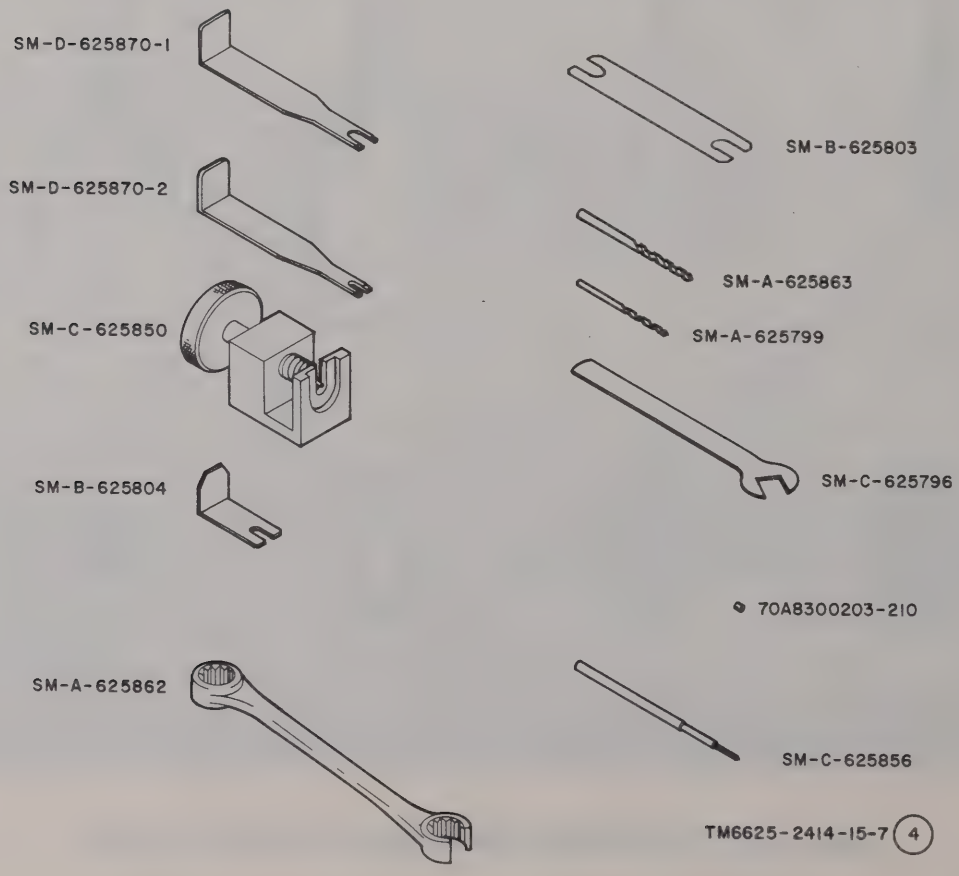


Figure 1–8(4). Test Facilities Kit MK–1191/AR, special tools (part 4 of 4).

CHAPTER 2

INSTALLATION AND OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2–1. Unpacking

a. Packaging Data. When packed for shipment, the maintenance accessories kit is placed in a corrugated shipping carton. A typical shipping carton and its contents are shown in figure 2–1. The shipping carton is approximately 34 inches by 27 inches by 20 inches, and provides a total capacity of 8.9 cubic feet. The shipping carton weighs approximately 5 1/2 pounds.

b. Removing Contents.

(1) Cut the paper tape along the top of the corrugated shipping carton (fig. 2–1) and fold back the flaps.

(2) Remove the envelope that contains the technical manuals.

(3) Remove the corner cushioning pads from each of the top four corners of the inner carton.

(4) Carefully lift out the corrugated inner carton.

(5) Cut the paper tape along the top of the corrugated inner carton and fold back the flaps.

(6) Remove the equipment.

2–2. Checking Unpacked Equipment

a. Inspect the maintenance accessories kit for damage incurred during shipment. If the maintenance accessories kit has been damaged, report the damage on DD Form 6 (para 1–3*b*).

b. See that the maintenance accessories kit is complete as listed on the packing slip. If a packing slip is not included, check the kit against the basic issue items list (app B). Report all discrepancies in accordance with TM 38–750. Shortage of a minor assembly or part that does not affect proper functioning should not prevent use of the maintenance accessories kit.

2–3. Installation

Maintenance accessories kit components require no special packing or preparation prior to shipment. The accessories are ready for immediate use upon arrival at general support. Separate slots or locations are provided for each component allowing easy removal or replacement. Wing nuts lock in the two removable plates in each section of the case. The work bench to be used should be of suitable size to accommodate a Test Facilities Kit MK–994/AR, the radio set to be checked, applicable components of the Test Facilities Kit MK–1191/AR (para 1–6) and other common test equipment such as multimeter, signal generator etc, used for testing the radio set. A convenient source of 18 volts dc is required for the MK–994/AR.

2–4. Component Utilization

The following charts indicate utilization of components of the maintenance accessories kit. Step-by-step procedures depicting utilization of the components are provided in the associated technical manuals (appendix A). The charts also indicate equivalent direct support maintenance accessory items that are part of the MK–1192/ARM.

A = Radio Set AN/ARC–114
B = Radio Set AN/ARC–115
C = Radio Set AN/ARC–116
D = Direction Finder Set AN/ARN–89
E = Test Facilities Kit MK–994/AR
F = Test Facilities Kit MK–1191/AR

a. Extender cards.

Common name-extender card	Nomenclature MK–1191/AR	Nomenclature MK–1192/ARM	Used on	Connects main chassis to
IF ampl	Adapter, Test MX–8527/AR	MP–9874	A	A1A5A7 & A1A5A15
			B	A1A2A5 & A1A2A11
			C	A1A9 & A1A15

Common name-extender card	Nomenclature MK-1191/AR	MK-1192/ARM	Used on	Connects main chassis to
No. 1	Adapter, Test MX-8503/AR	MP-9875	A	A1A5A8, A1A5A14, A1A5A9, A1A4A12, A1A5A10 & A1A511
			B	A1A2A4 & A1A2A6 thru A1A2A10
			C	A1A8, A1A10 thru A1A14 & A1A16
No. 3	Adapter, Test MX-8504/AR	MP-9866	A	A1A5A16
No. 5	Adapter, Test MX-8505/AR	MP-9870	B	A1A2A3
No. 6	Adapter, Test MX-8506/AR	MP-9869 &	A	A1A5A18
		MP-9868	B	A1A2A1
No. 7	Adapter, Test MX-8507/AR	MP-9876, MP-9872, &	A	A1A5A17
		MP-9867	B	A1A2A2
			C	A1A6
No. 9	Adapter, Test MX-8508/AR	MP-9871	C	A1A5
No. 10	Adapter, Test MX-8509/AR		C	A2A5
No. 11	Adapter, Test MX-8510/AR		C	A1A8/A1A16 bypass
No. 8	Adapter, Test MX-8511/AR	MP-9873	C	A1A7

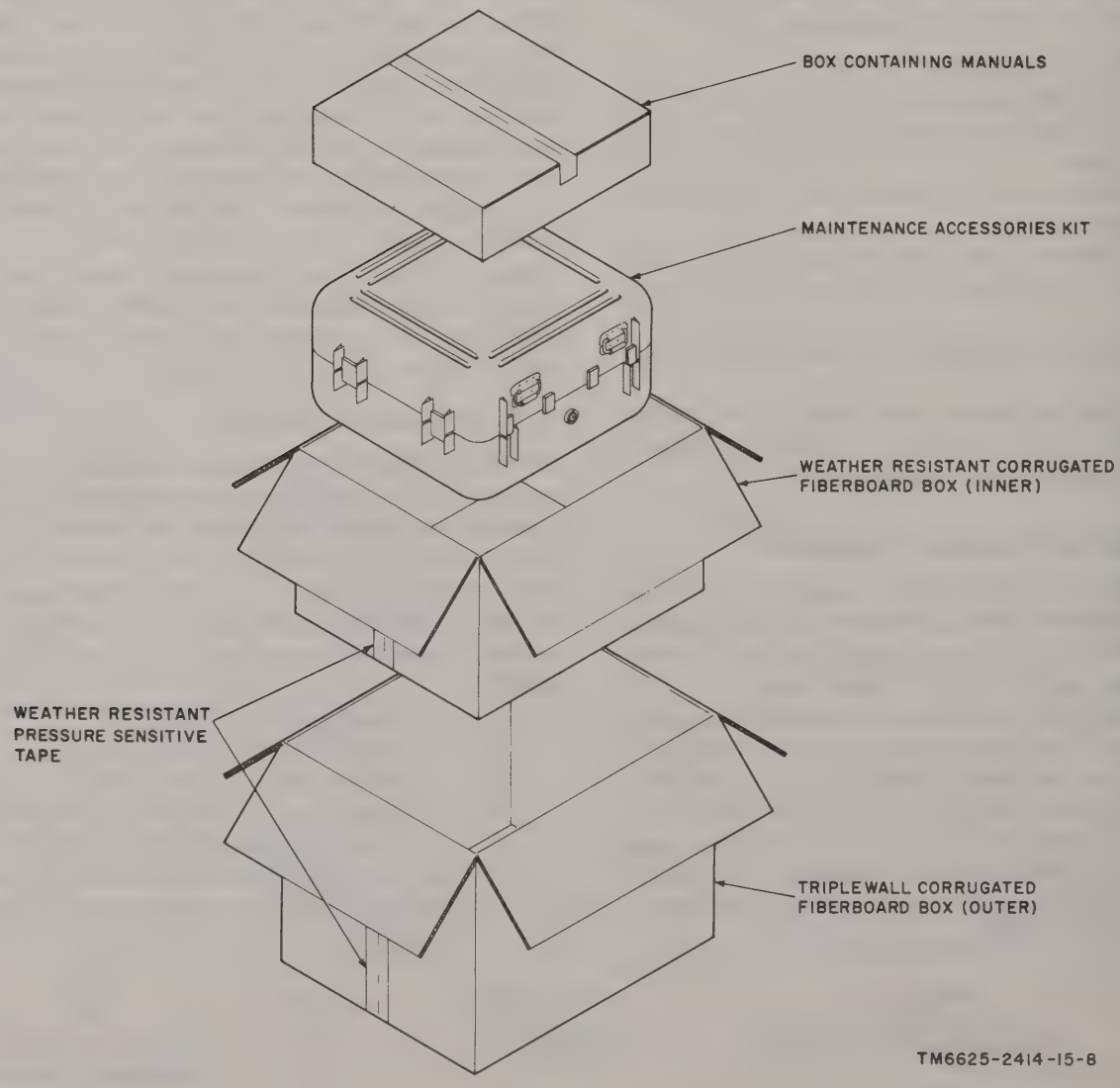


Figure 2-1. Packaging of maintenance accessories kit.

Ref des	Nomenclature MK-1191/AR	Nomenclature MK-1192/ARM	Used on	Connects From	Connects To
W102	Cable Assembly, Special Purpose, Electrical CX-12182/U (1 ft).		A	Audio (J17) Audio (J17) Main Chassis (P17)	Main Chassis (P17) Breakout Box No. 1 Breakout Box No. 1
W103	Cable Assembly, Special Purpose, Electrical CX-12183/U (1 ft)		A	Tuning Control (J15) Tuning Control (J15) Main Chassis (P15)	Main Chassis (P15) Breakout Box No. 1 Breakout Box No. 1
W104	Cable Assembly, Special Purpose, Electrical CX-12184/U (1 ft)		A	Tuning Control (P19) Tuning Control (P19) Main Chassis (J19) Tuning Control (P12) Tuning Control (P12) Main Chassis (J12)	Main Chassis (J19) Breakout Box No. 1 Breakout Box No. 1 Main Chassis (J12) Breakout Box No. 1 Breakout Box No. 1
W105	Cable Assembly, Special Purpose, Electrical CX-12185/U (1 ft)		A	Main Guard Rcvr (J10) Main Guard Rcvr (J10) Main Chassis (P10)	Main Chassis (P10) Breakout Box No. 1 Breakout Box No. 1
W106	Cable Assembly, Special Purpose, Electrical CX-12186/U (1 ft)	Cable Assembly, Special Purpose, Electrical CX-12172/ARM	A	Radio Front (P13) Radio Front (P13) Radio Rear (J13)	Radio Rear (J13) Breakout Box No. 1 Breakout Box No. 1
W1	Cable Assembly, Special Purpose, Electrical CG-3475/U (6 ft)		A	Bnc Plug	Conhex Plug
W107	Cable Assembly, Special Purpose, Electrical CX-12187/U (1 ft)		B	Tuner Control (P3) Tuner Control (P3) Main Chassis (J3)	Main Chassis (J3) Breakout Box No. 2 Breakout Box No. 2
W108	Cable Assembly, Special Purpose, Electrical CX-12188/U (1 ft)		B	Tuner Control (P4) Tuner Control (P4) Main Chassis (J4)	Main Chassis (J4) Breakout Box No. 2 Breakout Box No. 2
W109	Cable Assembly, Special Purpose, Electrical CX-12189/U (1 ft)		B	RF Ampl and Mixer (J6) RF Ampl and Mixer (J6) Main Chassis (P6)	Main Chassis (P6) Breakout Box No. 2 Breakout Box No. 2
W110	Cable Assembly, Special Purpose, Electrical CX-12190/U (1 ft)	Cable Assembly, Special Purpose, Electrical CX-12173/ARM & Cable Assembly, Special Purpose, Electrical CX-12174/ARM	B C	Xmtr/Reg Rear Section (P5) Xmtr/Reg Rear Section (P5) Main Chassis (J5) Tuning Control (P5) Tuning Control (P5) Main Chassis (J5) Tuning Control (J9) Tuning Control (J9) Main Chassis (P9)	Main Chassis (J5) Breakout Box No. 2 Breakout Box No. 2 Main Chassis (J5) Breakout Box No. 3 Breakout Box No. 3 Main Chassis (P9) Breakout Box No. 3 Breakout Box No. 3
W111	Cable Assembly, Special Purpose, Electrical CX-12191/U (1 ft)		C	Rf Tuner Assy (P6) Rf Tuner Assy (P6) Main Chassis (J6)	Main Chassis (J6) Breakout Box No. 3 Breakout Box No. 3
W112	Cable Assembly, Special Purpose, Electrical CX-12192/U (1 ft)		C	Xmtr/Reg (J3) Xmtr/Reg (J3) Main Chassis (P3)	Main Chassis (P3) Breakout Box No. 3 Breakout Box No. 3
W26	Cable Assembly, Special Purpose, Electrical CX-10894/AR		D	R-1496/ARN-89 chassis wiring. R-1496/ARN-89 modules.	Breakout Box No. 4 Breakout Box No. 4

c. Breakout boxes

Generic name	Function	Connects to—
Breakout Box No. 1 (SM-B-625701)	Continuity tests, dc voltage measurements	AN/ARC-114 subassembly connectors
Breakout Box No. 2 (SM-B-625706)	Continuity tests, dc voltage measurements	AN/ARC-115 subassembly connectors
Breakout Box No. 3 (SM-B-625711)	Continuity tests, dc voltage measurements	AN/ARC-116 subassembly connectors
Breakout Box No. 4 (SM-B-625716)	Continuity tests, dc voltage measurements	AN/ARC-89 subassembly connectors

d. Adapters

Generic name		
MK-1191/AR	MK-1192/ARM	Used on
Tee, Conhex UG-1893/U	Tee, Conhex UG-1893/U	A, B, and C
Jack, adapter, bnc, UG-914/U	Jack, adapter, bnc, UG-914/U	A, B, and C
Adapter, tps to bnc UG-1894/U	Adapter, tps to bnc UG-1894/U	A, B, and C
Conhex, jack to jack UG-1895/U	Conhex, jack to jack UG-1895/U	A, B, and C
Double banana plug - both ends	Double banana plug - both ends	A, B, and C
Double banana plug to bnc male	Double banana plug to bnc male	A, B, C, and D
Termination, microphone	----------	A, B, and C
Termination, headset	----------	A, B, and C
Adapter, headset	----------	A, B, and C
Termination, power supply, SM-B-625792	----------	A
Termination, power supply, SM-B-625877	----------	B
Termination, power supply, SM-B-625879	----------	C
Shield (for 59.0 MHz IF)	----------	C
Attenuator, Sierra, SM-A-625793	----------	A, B, and C

e. Special tools (common usage).

Generic name	Used on	Function
Tool, crimp, 612118	A, B, C	Repair Amphenol connectors
Tool, crimp, MS3191-1	D	Repair Bendix and Cannon connectors
Adapter, crimp, 612516	A, B, C	Repair Amphenol connector sockets
Adapter, crimp, 612517	A, B, C	Repair Amphenol connector pins
Tool, insertion, 294-123	A, B, C	Insert Amphenol connector pins and sockets
Tool, extractor, 294-205	A, B, C	Extract Amphenol connector pins and sockets
Tool, insertion, CIT 16	E	Repair Bendix connectors
Tool, insertion, CIT120	E	Repair Bendix connectors
Tool, extractor, CET 16	E	Repair Bendix connectors
Tool, extractor, CET 20	E	Repair Bendix connectors
Tool, positioner, P-20-3191-37	F	Repair Cannon connectors
Tool, extractor/insertion, CIET-20HDB	F	Repair Cannon connectors

f. Special tools

Generic name	Used on	Function
Wrench (5/16), open end	A, B	Tuning control assembly repair
Support and drill fixture (AN/ARC-114)	A	Tuning control assembly repair
Drill, twist, 1/16	A, B	Tuning control assembly repair
Drill, twist, 3/64	A	Tuning control assembly repair
Driver, thinwall, HS-6	C	Aids removal of A2C1
Wrench, knurled socket, 36KB515	B, C	Remove fuse holder
Fixture, actuator positioning	A	Tuning control assembly repair, position actuator
Blade, thickness gage 0.003	A	Tuning control assembly repair
Blade, thickness gage 0.020	A	Tuning control assembly repair
Support and drill fixture (AN/ARC-115)	B	Tuning control assembly repair
Wrench, torque, F-10	A, B, C	Torque transistors
Wrench, torque, 12 oz in.	A	Torque transformer and gear assembly
Pliers, retaining ring	A, B, C	Remove retaining rings

Generic name	Used on	Function
Screw, set	A, B	Tuning control assembly repair
Installation tool, crescent ring 0120	A, B, C	Install crescent rings
Installation tool, crescent ring 0180	A, B, C	Install crescent rings
Removal tool, crescent ring 0120	A, B, C	Remove crescent rings
Removal tool, crescent ring 0180	A, B, C	Remove crescent rings
Puller, mechanical	A	Tuning control assembly repair, gear removal
Installation, pin, 0.046; installation tool, pin, 0.046; installation tool; sprocket pin, 0.046; and removal tool, pin, 0.046	A, B	Tuning control assembly repair, pin removal/ insertion
Fixture, number alignment (AN/ARC-114)	A	Counter dial alignment
Fixture, number alignment (AN/ARC-115)	B	Counter dial alignment
Installation tool, sprocket	A	Install sprocket on shaft
Drift pin, gear aligning	A	Tuning/channel alignment
Fixture, electrical equipment (AN/ARC-114)	A	Dzus/guide pin alignment
Fixture, electrical equipment (AN/ARC-115)	B	Dzus/guide pin alignment
Wrench, open end, box, 7/16-3/8 modified	A	Filter nut removal
Installation tool, pin, 0.062; removal tool, pin, 0.062; installation tool, drive pin; removal tool, drive pin	A	Tuning control assembly repair
Installation tool, drive pin	A	Install transformer and gear assembly drive pin
Removal tool, drive pin	A	Remove transformer and gear assembly drive pin

Section II. OPERATING INSTRUCTIONS

2-5. Operation—Crimping Tool, MS3191-1

(fig. 1-7)

CAUTION

There are no adjustments to be made on crimping tool. Never attempt to disassemble tool or loosen or tighten elastic stop nuts on back of tool.

a. Place tool in open position (close handles to trip ratchet, then release pressure).

b. Loosen slide locking screw then pull slide to open position.

c. Pull positioner release all the way down against spring pressure, and insert desired positioner.

NOTE

Use proper positioner for each contact size in tool. Positioners are color coded and stamped for proper contact size identification. Store positioners in handle when not in use by removing spring loaded plug.

d. Mate flat on flange of positioner with flat in handle.

e. Push slide to closed position and tighten slide locking screw.

f. Insert prepared contact and wire through the indenter opening into positioner.

g. Squeeze handles together until the positive stop is reached. Tool will release and return to open position.

h. Remove crimped contact and wire.

(ifg. 1-7)

2-6. Operation—Crimping Tool—612118

(fig. 1-7)

CAUTION

Never attempt to disassemble tool or loosen or tighten elastic stop nuts on back of tool.

a. Loosen latch locking screw then pull latch to open position.

b. Select desired locator (locators are stamped with part numbers) and place in position.

c. Slide latch to closed position then tighten locking screw.

d. Observe microcrimp indicator. Reset indenter setting if necessary by pulling on microcrimp adjusting knob and rotating until desired setting is obtained. Release knob in detent.

e. Open tool then insert prepared contact and wire through the indenter opening into position.

f. Squeeze handles together until the positive stop is reached. Tool will then release and return to open position.

g. Remove crimped contact and wire.

CHAPTER 3

MAINTENANCE

Section I. GENERAL

3–1. Scope of Maintenance

The maintenance duties assigned to the operator and organizational repairman of the equipment are listed below, together with a reference to the paragraphs covering the specific maintenance functions.

a. Daily preventive maintenance checks and services (para 3–4).

b. Monthly preventive maintenance checks and services (para 3–5).

c. Cleaning (para 3–6).

d. Touchup painting (para 3–7).

3–2. Tools and Materials Required

Tools required for organizational maintenance are contained in Tool Kit, Electronic Equipment TK–101/G. Materials needed are:

a. Lint free cloth.

b. Trichloroethane, technical: liquid form, per Federal Specification O–T–620, Type I.

c. Brush, Mil–G–7241.

3–3. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of the equipment to prevent the occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

a. Systematic Care. The procedures given in paragraphs 3–4 through 3–8 cover routine systematic care and cleaning essential to proper upkeep and operation of the equipment.

b. Preventive Maintenance Checks and Services. The preventive maintenance checks and services charts (para 3–4, 3–5, and 3–6) outline functions to be performed at specific intervals. These checks and services are to maintain Army electronic equipment in a compat-serviceable condition; that is, in good general (physical) condition and in good operating condition. To assist operators in maintaining combat serviceability, the charts indicate what to check, how to check, and what the normal conditions are; the *references* column lists the illustrations, paragraphs, or manuals that contain detailed repair or replacement procedures. If the defect cannot be remedied by performing the corrective actions listed, higher category maintenance or repair is required. Records and reports of these checks and services must be made in accordance with the requirements set forth in TM 38–750.

Section II. MAINTENANCE PROCEDURES

3–4. Daily Preventive Maintenance Checks and Services Chart

Sequence No.	Item to be inspected	Procedure	References
1	Completeness	See that the equipment is complete.	Para 1–6
2	Exterior surfaces	Clean the exterior surfaces.	Para 3–6
3	Connectors	Check the tightness of all connectors.	None
4	Cables	Remove any grease, oil, or dirt from cables and connectors	Para 1–6

3–5. Monthly Preventive Maintenance Checks and Services Chart

Sequence No.	Item to be inspected	Procedure	References
1	Cables	Inspect cables and wires for chafed, cracked, or frayed insulation. Replace connectors that are broken, arced, stripped, or worn excessively.	None

2	Handles and latches	Inspect handles, latches, and hinges for looseness. Replace or tighten as necessary.	None
3	Metal surfaces	Inspect exposed metal surfaces for rust and corrosion. Touch up paint as required.	Para 3-8
4	Gaskets	Inspect gaskets for cracks, and excessive wear.	None
5	Interior	Clean interior of chassis and cabinet.	None
6	Publications	See that all publications are complete, serviceable, and current.	DA Pam 310-4
7	Modifications	Check DA Pam 310-7 to determine whether new applicable MWO's have been published. All URGENT MWO's must be applied immediately. All NORMAL MWO's must be scheduled.	DA Pam 310-7

3-6. Cleaning

Inspect the exterior of the equipment. The exterior surfaces should be clean, and free of dust, dirt, grease, and fungus.

a. Remove dust and loose dirt with a clean, soft cloth.

WARNING

Trichloroethane fumes are toxic. Provide adequate ventilation. DO NOT use near a flame. Trichloroethane is not flammable but exposure to high heat in a poorly ventilated area can convert the fumes to a highly toxic gas.

b. Remove grease, fungus, and ground-in dirt from the case; use a cloth dampened (not wet) with Cleaning Compound, trichloroethane.

c. Remove dust and dirt from plugs and jacks with a brush.

d. Clean the front panels and potted cable connectors; use a soft clean cloth. If dirt is difficult to remove, dampen the cloth with water; mild soap may be used for more effective cleaning.

3-7. Touchup Painting Instructions

a. When the finish on the exterior of the equipment has been scarred or damaged, corrosion may be prevented by touching up the surfaces. Touch up the surface as outlined in (1), (2), and (3) below.

(1) Use No. 000 sandpaper to clean the surface down to the bare metal; obtain a bright smooth finish.

(2) Sand the area back to solid paint and feather the paint edge that leads to the exposed metal.

(3) Wipe the area clean and apply one coat of zinc chromate metal primer FSN 8010-835-2114, and two thin finish coats of enamel to metal surfaces.

b. When a touchup paint job is necessary apply paint with a small brush. For the proper care of the brushes and painting equipment refer to TM 9-213 and TB 746-10.

3-8. Lubrication

Crimping tools MS3191-1 and 612118 should be lubricated using Molykote Whytekote 505 grease (Alpha-Molykote Corporation, 65 Harvard Avenue, Stamford, Conn.) or equivalent.

Section III. DS, GS, AND DEPOT MAINTENANCE

3-9. General

The DS, GS, and depot maintenance procedures supplement the procedures described in section II. The maintenance operations performed are the same at all categories. The only test equipment required for electrical troubleshooting is Multimeter TS-352 B/U.

3-10. Troubleshooting

a. Visual inspection and continuity checking are the only techniques required for troubleshooting the test facilities kit. Most circuits are straight through (zero ohms) and the test jacks are labeled with the same designations as the connector pins.

b. The exceptions are adapter terminations for the power supply, headset, microphone, and breakout box No. 1 (J29–17 to J26–17), breakout box No. 2 (J8–39, 40 to J12–39, 40), and breakout box No. 3 (J19–1 to J20–1). In the case of the adapters refer to figures 3–1 through 3–6 for resistance values.

c. When troubleshooting the breakout boxes, insert a jumper into the red and black posts, using a Multimeter TS–352 B/U continuity should be measured at the afore mentioned terminals. Removing the jumper the multimeter should indicate an open circuit.

3–11. Repairs

a. General. Repair of breakout boxes, terminations, and cables consists of replacing any defective components or wiring. The components are jacks, connectors, and resistors. Given below are cable descriptions, and procedures for repair of wiring, and component replacement.

b. Repair of Cables. Cables W102 through W112 are repaired by replacing Amphenol connectors. The defective connector and potting material is removed by cutting them off at the end of the cable. A new connector is installed by inserting cable leads into pins or sockets and crimping, then installing into connector holes. Crimping tool SM–A–625812, adapters SM–A–625813–1 (pins), SM–A–625813–2 (sockets), insertion tool SM–A–625815 and extractor tool SM–A–625816 are all used to perform this function. Pins are SM–A–617935–5 and sockets SM–A–617935–4. Cable W26 is repaired by replacing Cannon connectors. The defective connector is removed and a new connector installed using crimping tool MS3191–1, red adapter MS3191–20A, extractor tool SM–A–625817–2 and insertion tool SM–A–625817–4.

(1) *Cable W1.* Cable W1 consists of 6 feet of RG–188A/U. The coaxial cable is terminated with right-angle female plug P1 and male BNC plug P2. For instructions on the replacement of connectors refer to figures 3–7 and 3–8.

(2) *Cable W102.* Cable W102 is a 26-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Pin number 15 is the guide pin.

(3) *Cable W103.* Cable W103 is a 11-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Guide pin is number 7.

(4) *Cable W104.* Cable W104 is a 10-wire (each wire is 26 awg and 11 inches long), rubber insulated with multipin plugs P1 and P2. Guide pin is number 6.

(5) *Cable W105.* Cable W105 is a 9-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Guide pin is number 6.

(6) *Cable W106.* Cable W106 is a 50-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Guide pins numbers 36 and 39.

(7) *Cable W107.* Cable W107 is a 24-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Guide pin is number 26.

(8) *Cable W108.* Cable W108 is a 33-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2.

(9) *Cable W109.* Cable W109 is a 9-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2.

(10) *Cable W110.* Cable W110 is a 52-wire (each wire is 26 awg and 11 inches long except for the wire connected to connector P1, pin 14 which is a RG–178B/U wire and is also 11 inches long), rubber insulated cable with multipin plugs P1 and P2. P1–14 shield connects to P1–42 with No. 26 awg wire.

(11) *Cable W111.* Cable W111 is a 9-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Pins 1 and 2, and 11 and 12 are shielded pairs. P1–3 Connects to shields of P1–1 and P1–2 with No. 26 awg wire. P1–10 Connects to shields of P1–11 and P1–12 with No. 26 awg wire.

(12) *Cable 112.* Cable W112 is a 17-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin connector plugs P1 and P2.

(13) *Cable W26.* Cable W26 is a 14-wire, rubber insulated cable with multipin plugs P1 and P2. Each wire is 22 awg and 12 inches long, except pins 1, 5, 8, and 9 which is 20 awg shielded and 12 inches long. P1–2 connects in series to shields at P1–1, 5, 8, and 9 with No. 22 awg wire. P2–2 connects to shield at P2–1 with No. 22 awg wire.

3–12. Repair of Breakout Boxes/ Terminations

a. General. Repair of breakout boxes and terminations consist of replacing any defective components or wiring. The components are jacks, connectors, and resistors. Procedures for repairing wiring and replacing components are given below.

b. Repair of Internal Wiring. Breakout boxes are wired with 24 awg wire except for breakout box SM–B–625716 current monitoring circuitry which is 20 awg. Power supply terminations have 24 awg wire. Microphone and headset terminations use 26 awg wire. Standard tools are used to replace defective wiring of all boxes.

c. Repair/Replacement of Jacks. Jacks are replaced by unsoldering any wiring, removing jack, replacing it with a new one, and then resoldering connection.

d. Repair/Replacement of Connectors. Three types of connectors are repaired: Amphenol, Bendix, and Cannon. Amphenol connectors are repaired/replaced using crimping tool SM–A–625812, adapters SM–A–625813–1 (pins), SM–A–625813–2 (sockets), insertion tool SM–A–625815 and extractor tool SM–A–625816. Bendix connectors are repaired using crimping tool MS3191–1, contact positioner MS3191–20A, extractor tool SM–A–625817–2 and insertion tool SM–A–625817–4.

NOTE

Extractor tool SM-A-625817-2 has a reversible head.

Cannon connectors are repaired using crimping tool MS3191–1, positioner P–20–3191–37 (contact size No. 20) and extractor/insertion tool CIET–20HDB.

e. Replace Resistors. Resistance values of terminations are given in the schematics, figures 3–1 through 3–5. Defective resistors are replaced by standard procedures.

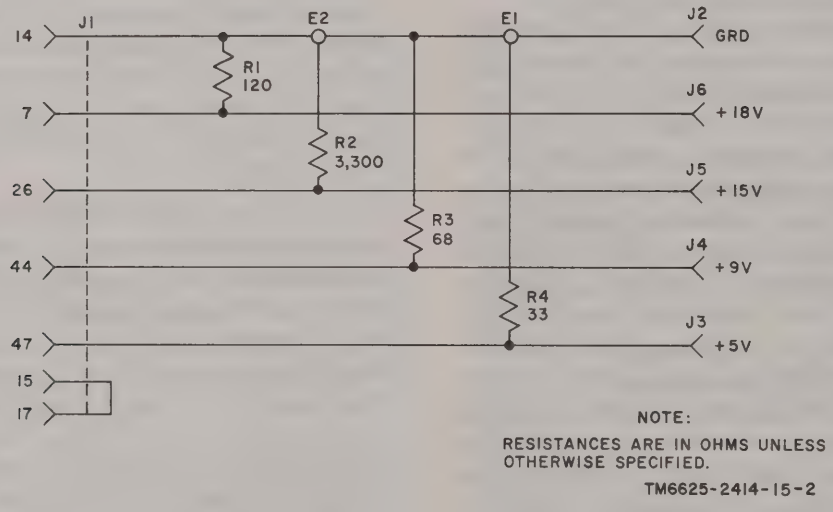


Figure 3–1. Power Supply Termination (AN/ARC–114), schematic diagram.

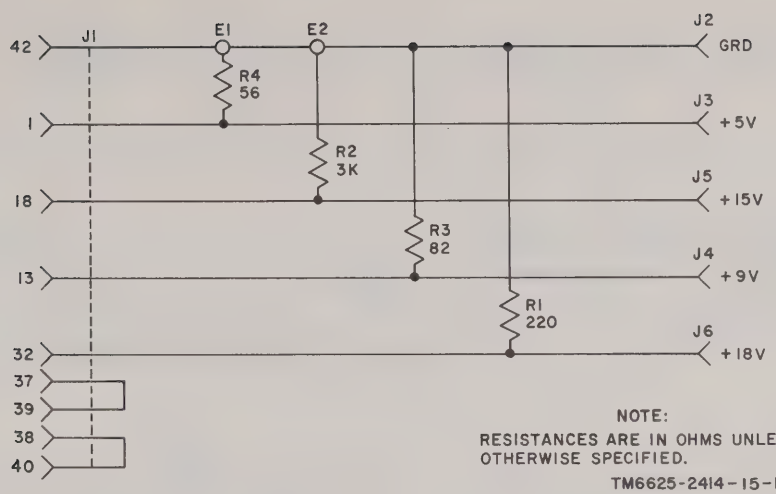


Figure 3-2. Power Supply Termination (AN/ARC-115), schematic diagram.

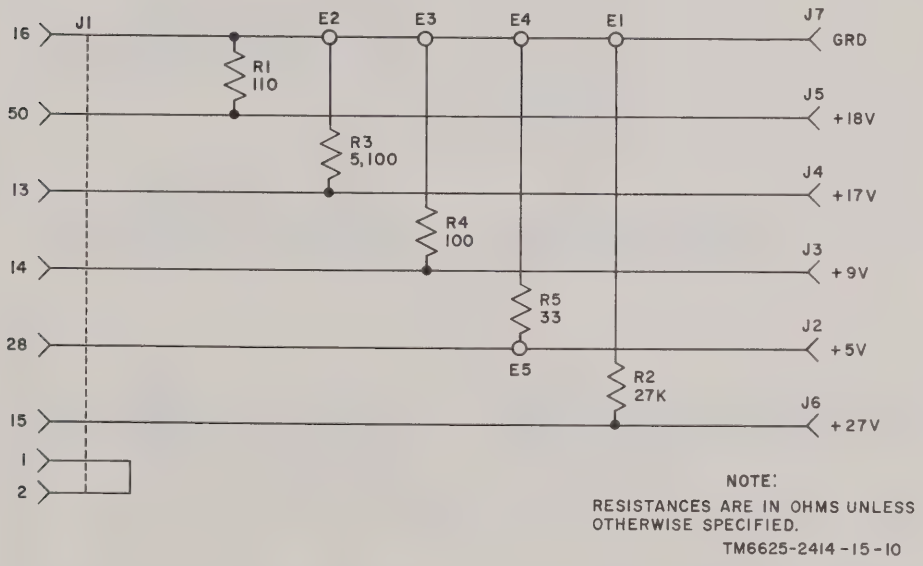


Figure 3-3. Power Supply Termination (AN/ARC-116), schematic diagram.

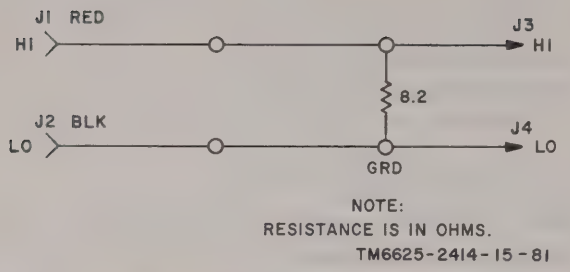


Figure 3–4. Headset termination, schematic diagram.

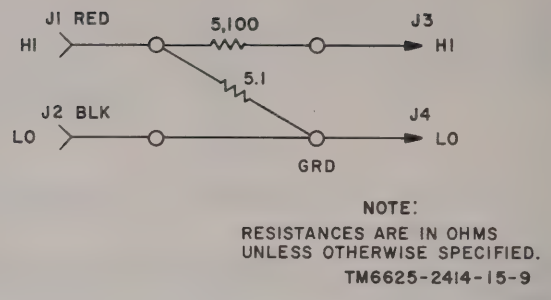


Figure 3–5. Microphone termination, schematic diagram.

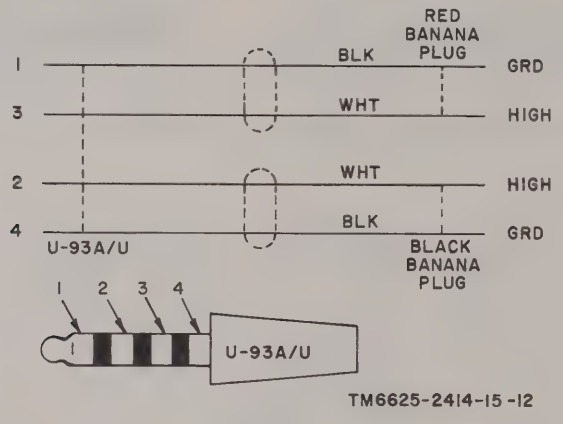
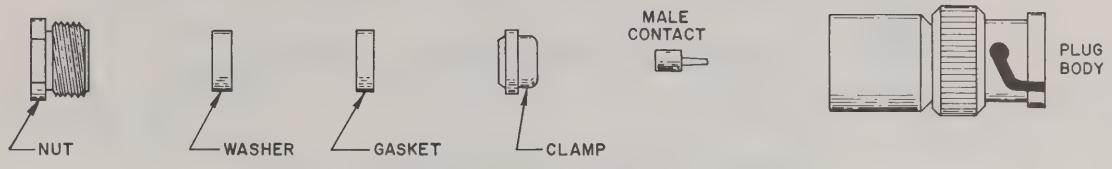
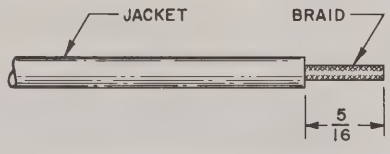
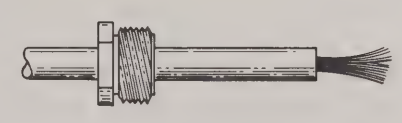
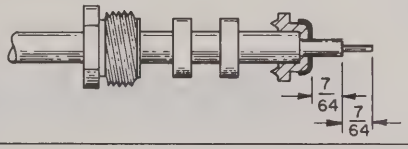
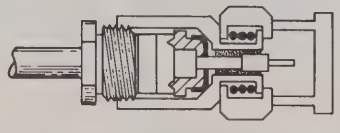


Figure 3–6. Headset adapter cable, schematic diagram.

ASSEMBLY OF TYPE BNC RADIO FREQUENCY CABLE PLUGS UG-88E/U AND UG-260D/U

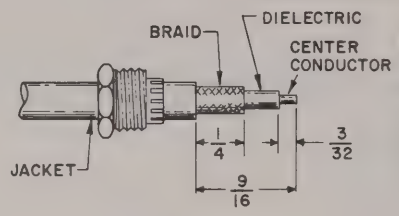
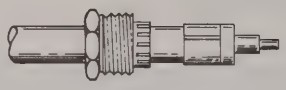
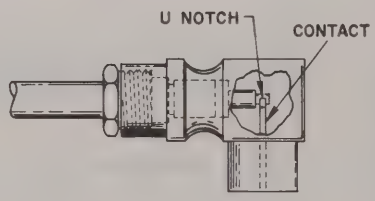
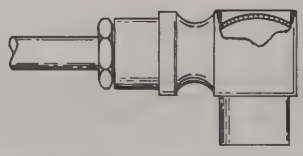


STEP 1		CUT OFF END OF CABLE SQUARE AND REMOVE JACKET 5/16" FROM END. DO NOT NICK BRAID.
STEP 2		COMB OUT BRAID.
STEP 3		TAPER BRAID, SLIDE NUT, WASHER, GASKET AND CLAMP OVER TAPERED BRAID, MAKING SURE INNER SHOULDER OF CLAMP IS POSITIONED TIGHTLY AGAINST END OF JACKET.
STEP 4		FLARE BACK BRAID, TRIM IF NECESSARY, TRIM DIELECTRIC TO DIMENSION SHOWN. DO NOT NICK INNER CONDUCTOR. CUT OFF INNER CONDUCTOR 7/64" FROM DIELECTRIC.
STEP 5		SOLDER CONTACT ON INNER CONDUCTOR. REMOVE EXCESS SOLDER. DO NOT OVER HEAT DIELECTRIC AS IT WILL BECOME SWOLLEN AND WILL NOT ENTER BODY AND INSULATOR PROPERLY.
STEP 6		INSERT CABLE AND HARDWARE INTO PLUG BODY. MAKE SURE GASKET IS PROPERLY SEATED ON SHARP EDGE OF CLAMP AFTER NUT IS STARTED, TIGHTEN WITH WRENCH. NOTE: SHARP EDGE OF CLAMP MUST SPLIT GASKET.

TM6625-2414-15-61

Figure 3-7. Assembly instructions for type BNC RF cable connectors.

ASSEMBLY OF RIGHT ANGLE CABLE PLUG SM-A-595802-4

STEP 1		CUT CABLE OFF SQUARE ON END. DO NOT DEFORM. SLIDE CABLE NUT OVER CABLE. CUT JACKET, BRAID, AND DIELECTRIC TO DIMENSION SHOWN.
STEP 2		SLIDE SLEEVE OVER DIELECTRIC, UNDER BRAID. PLACE CLAMP OVER BRAID, FLUSH UP AGAINST JACKET.
STEP 3		INSERT CABLE AND ASSEMBLY INTO PLUG BODY SO THAT CENTER CONDUCTOR RESTS IN CONTACT U NOTCH. SOLDER CENTER CONDUCTOR TO CONTACT U NOTCH.
STEP 4		TIGHTEN NUT. PLACE CAP IN PLUG BODY RECESS AND SOLDER IN PLACE.

TM6625-2414-15-71

Figure 3-8. Assembly instructions for RF cable connector.

CHAPTER 4

SHIPMENT, LIMITED STORAGE, AND DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

Section I. SHIPMENT AND LIMITED STORAGE

4–1. Disassembly of Equipment

Prepare the maintenance accessories kit for shipment or storage as follows:

a. Disconnect all cables from the maintenance accessories kit connectors.

b. Check to see that all retaining screws along the perimeter of the front panels are secure.

c. Coil each cable assembly carefully and place the cables into the cover of the maintenance accessories kit carrying case. Secure the cables with the retaining straps.

d. Insert extender cards and special tools in appropriate pockets.

e. Insert the technical manual in the appropriate box.

f. If the cover has been disconnected, insert the hinge pins into the mating hinge sections (fig. 1–1) on the carrying case lid. Slide the lid to the extreme left. Close and secure the maintenance accessories kit latches.

4–2. Packaging for Shipment

Wrap the test facilities kit in waterproof paper and place the package in a corrugated carton. Use reinforced gummed tape for sealing the corrugated cartons. If limited storage is expected, place the carton within an outer carton and seal.

Section II. DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

4–3. Authority for Demolition

Demolition of the equipment will be accomplished only upon the order of the commander. The procedures given in paragraph 4–4 will be used to prevent further use of the equipment.

4–4. Methods of Destruction

Use any of the following methods to destroy the equipment.

a. Smash. Smash the controls, switches, capacitors, transformers, and meters; use sledges, axes, handaxes, pickaxes, hammers, or crowbars.

b. Cut. Cut the interconnecting wiring and slash the rf shield; use axes, handaxes, or machetes.

c. Burn. Burn cables and technical manuals; use gasoline, kerosene, or oil.

d. If a complete destruction of the equipment cannot be accomplished in the available time, destroy the following components in the order given:

(1) Breakout boxes.
(2) Extender card.
(3) Special fixtures and tools.
(4) Extender cables and termination boxes.
(5) Technical manuals.

e. The reporting of the destruction of equipment is to be done through command channels.

APPENDIX A

REFERENCES

Following is a list of references applicable to the operator and organizational maintenance repairman of Test Facilities Kit MK-1191/AR:

DA Pam 310-4	Index of Technical Manual, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins and Lubrication Orders
DA Pam 310-7	U.S. Army Equipment Index of Modification Work Orders
SB 11-497	Electronic Items, Depot/Contractor Repair Support
SB 38-100	Preservation, Packaging and Packing Materials, Supplies, and Equipment Used by the Army
SB 700-50	Expendable Items (Except: Medical, Class V, Repair Parts, and Heraldic Items)
TB SIG 222	Solder and Soldering
TB SIG 355-1	Depot Inspection Standard for Repaired Signal Equipment
TB SIG 355-2	Depot Inspection Standard for Refinishing Repaired Signal Equipment
TB SIG 355-3	Depot Inspection Standard for Moisture and Fungus Resistant Treatment
TB 746-10	Field Instructions for Painting and Preserving Electronics Command Equipment
TM 9-213	Painting Instructions for Field Use
TM 10-8415-202-13	Operator, Organizational, and Direct Support Maintenance Manual, Including Repair Parts List: Helmet, Flying, Protective, APH-5 (FSN 8415-577-4142 and 8415-577-4143) APH-5A (FSN 8415-782-3036 and 8145-782-3037)
TM 11-4940-238-15	Operator, Organizational, DS, GS, and Depot Maintenance Manual: Electronic Shops, Shelter Mounted Avionics AN/ASM-146A and AN/ASM-147A
TM 11-5551-D	R. F. Signal Generator Set AN/URM-25D
TM 11-5821-259-20	Organizational Maintenance Manual Including Repair Parts and Special Tool Lists Radio Set AN/ARC-114
TM 11-5821-260-20	Organizational Maintenance Manual Including Repair Parts and Special Tool Lists Radio Set AN/ARC-115
TM 11-5821-261-20	Organizational Maintenance Manual Including Repair Parts and Special Tool Lists Radio Set AN/ARC-116
TM 11-5821-262-20	Organizational Maintenance Manual Including Repair Parts and Special Tool Lists Communication System Control C-6533/ARC
TM 11-5821-259-35	DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tools Lists; Radio Set AN/ARC-114
TM 11-5821-260-35	DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tools List; Radio Set AN/ARC-115
TM 11-5821-261-35	DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tools List; Radio Set AN/ARC-116
TM 11-5821-262-35	DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tools List; Communication System Control C-6533/ARC
TM 11-5826-227-20	Organizational Maintenance Manual: Direction Finder Set AN/ARN-89
TM 11-5826-227-35	DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tools List; Direction Finder Set AN/ARN-89

TM 11-5895-537-50	Depot Maintenance Manual: Heading-Radio Bearing Indicator ID-1351/A
TM 11-6605-202-12	Organizational Maintenance Manual: Gyromagnetic Compass Set AN/ASN-43
TM 11-6625-200-15	Operator, Organizational, DS, GS, and Maintenance Manual: Multimeters ME-26A/U, ME-26B/U, ME-26C/U, and ME-26D/U
TM 11-6625-320-12	Operator and Organizational Maintenance Manual: Voltmeter, Meter ME-30A/U and Voltmeters, Electronic ME-30B/U, ME-30C/U, and ME-30E/U
TM 11-6625-438-15	Operator's Organizational, DS, GS, and Depot Maintenance Manual: Voltmeter, Electronic AN/USM-98
TM 11-6625-446-15	Operator, Organizational, Field and Depot Maintenance Manual: Wattmeter AN/URM-120
TM 11-6625-508-10	Operator's Manual: Signal Generators AN/USM-44 and AN/USM-44A
TM 11-6625-524-14	Operator, Organizational and Field Maintenance Manual: Voltmeter, Electronic AN/URM-145
TM 11-6625-683-15	Operator, Organizational, DS, GS, and Depot Maintenance Manual: Signal Generator AN/URM-127
TM 11-6625-928-12	Operator and Organizational Maintenance Manual Including Repair Parts and Special Tool Lists: Test Facilities Kit MK-994/AR
TM 11-6625-2405-15	Operator's Organizational, DS, GS, and Depot Maintenance Manual: Maintenance Accessory Kit MK-1192/ARM
TM 38-750	Army Equipment Record Procedures

APPENDIX B

BASIC ISSUE ITEMS

Section I. INTRODUCTION

B-1. Scope

This appendix lists items comprising an operable equipment and those required for installation, operation, or operator's maintenance for Test Facilities Kit MK-1191/AR.

B-2. Explanation of Columns

a. Source, Maintenance, and Recoverability Codes (SMR) Column.

(1) *Source code (S).* The selection status and source for the listed item is the first code indicated in this column. The source codes used and their explanations are—

Code	Explanation
P	Applies to repair parts that are stocked in or supplied from the GSA/DSA, or Army supply system, and authorized for use at indicated maintenance categories.
AF	Applies to repair parts requiring assembly at a category higher than that authorized to replace the part.

(2) *Maintenance code (M).* The lowest category of maintenance authorized to install the item is indicated by the second code in the column. The maintenance category codes and their explanation are—

Code	Explanation
C	Operator/Crew
O	Organizational maintenance

(3) *Recoverability code (R).* The recoverability code is the third code in the column. It indicates whether unserviceable items should be returned for recovery or salvage. Recoverability code and its explanation is as follows:

Code	Explanation
R	Applies to repair parts and assemblies that are economically repairable at DSU and GSU activities and are normally furnished by supply on an exchange basis.

NOTE

When no code is indicated in the recoverability column, the part will be considered expendable.

b. Federal Stock Number Column. This column indicates the Federal stock number for the item.

c. Description Column. This column includes the Federal item name and any additional description of the item which may be required. A part number or other reference number is followed by the applicable five-digit Federal Supply Code for Manufacturers. Usable on code column is not used.

d. Unit of Issue Column. The unit used as a basis of issue (e.g., ea, pr, ft, yd, etc.) is given in this column.

e. Quantity Incorporated in Unit Pack Column. Not used.

f. Quantity Incorporated in Unit Column. The total quantity of the item used in the equipment is given in this column.

g. Quantity Furnished with Equipment Column. This column lists the quantity of the item supplied for initial operation of the equipment and/or the quantities authorized to be kept on hand by the operator for maintenance of the equipment.

h. Quantity Authorized Column. Not used.

i. Illustrations Column.

(1) *Figure number (a).* The number of the illustration on which the item is shown is indicated in this column.

(2) *Item No. or reference designation (b).* The reference designation and/or item number callout used to reference the item on the illustration appears in this column.

Section II. BASIC ISSUE ITEMS

(1) SOURCE CD (a)	(1) MAINT. CD (b)	(1) REC. CODE (c)	BASIC ISSUE ITEMS LIST (2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / MODEL 1 2 3 4 5 6	(4) UNIT OF ISSUE	(5) QTY INC IN UNIT PACK	(6) QTY INC IN UNIT	(7) QTY AUTH	(8) ILLUSTRATIONS (A) FIGURE NUMBER	(8) ILLUSTRATIONS (B) ITEM OR SYMBOL NUMBER
			6625-	TEST FACILITIES KIT MK-1191/AR	ea		1	1	1-1	
				TM 11-6625-2414-12	ea		2	2	2-1	
				TM 11-6625-2414-45	ea		2	2	2-1	
				Quantity of two (2) each technical manuals are packed with each equipment. If an additional need exists, order thru nearest AG office.						
				NO PARTS AUTHORIZED CREW/OPERATOR						
				NO TOOLS OR TEST EQUIPMENT ARE TO BE ISSUED WITH THIS EQUIPMENT.						

APPENDIX C

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

C-1. General

This appendix provides a summary of the maintenance operations covered in the equipment literature for Test Facilities Kit MK-1191/AR. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

C-2. Explanation of Format for Maintenance Allocation Chart

a. Group Number. Group numbers correspond to the reference designation prefix assigned in accordance with ASA Y32.16, Electrical and Electronics Reference Designations. They indicate the relation of listed items to the next higher assembly.

b. Component Assembly Nomenclature. This column lists the item names of component units, assemblies, subassemblies, and modules on which maintenance is authorized.

c. Maintenance Function. This column indicates the maintenance category at which performance of the specific maintenance function is authorized. Authorization to perform a function at any category also includes authorization to perform that function at higher categories. The codes used represent the various maintenance categories as follows:

Code	Maintenance category
C	Operator/crew
O	Organizational maintenance
F	Direct support maintenance
H	General support maintenance
D	Depot maintenance

d. Tools and Equipment. The numbers appearing in this column refer to specific tools and equipment which are identified by these numbers in section III.

e. Remarks. Self-explanatory.

C-3. Explanation of Format for Tool and Test Equipment Requirements

The columns in the tool and test equipment requirements chart are as follows:

a. Tools and Equipment. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool for the maintenance function.

b. Maintenance Category. The codes in this column indicate the maintenance category normally allocated the facility.

c. Nomenclature. This column lists tools, test and maintenance equipment required to perform the maintenance functions.

d. Federal Stock Number. This column lists the Federal stock number.

e. Tool Number. Not used.

Section II. MAINTENANCE ALLOCATION CHART

GROUP NUMBER	COMPONENT ASSEMBLY NOMENCLATURE	MAINTENANCE FUNCTIONS											TOOLS AND EQUIPMENT	REMARKS — NOTES
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD		
1	TEST FACILITIES KIT MK-1191/AR	O		O									1	1. General support performs organizational maintenance operations. 2. Performs operational checks. Visually inspect for broken/ cracked connectors, jacks, frayed wiring, missing accessories, clean unit. Repair by component replacement.
			H	H						H	H		2 and 3	3. Perform continuity checks. Repair defective components and cabling. Replace jacks, connectors, switches.

Section II. MAINTENANCE ALLOCATION CHART (Cont).

GROUP NUMBER	COMPONENT ASSEMBLY NOMENCLATURE	MAINTENANCE FUNCTIONS											TOOLS AND EQUIPMENT	REMARKS — NOTES
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD		
1 (cont)							H							4. Calibrate torque wrenches. Perform visual inspection. Replace missing items. Clean.
1A	COMMON ACCESSORIES	O		O					O				1	5. Perform visual inspection. Replace missing items. Clean.
1B	AN/ARC-114 ACCESSORIES	O		O					O				1	6. Replace missing or defective components and test adapters.
			H							H	H		2 and 3	See note 3 above.
1C	AN/ARC-115 ACCESSORIES	O		O					O				1	See note 6 above.
			H							H	H		2 and 3	See note 3 above.
1D	AN/ARC-116 ACCESSORIES	O		O					O				1	See note 6 above.
			H							H	H		2 and 3	See note 3 above.

Section II. MAINTENANCE ALLOCATION CHART (Cont).

GROUP NUMBER	COMPONENT ASSEMBLY NOMENCLATURE	MAINTENANCE FUNCTIONS											TOOLS AND EQUIPMENT	REMARKS — NOTES
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD		
1E	MICROPHONE/HEADSET TERMINATION	O		O					O				1	See note 6 above.
			H							H	H		2 and 3	7. Perform continuity and resistance checks. Repair defective components and cabling. Replace jacks, connectors, switches, resistors.

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOLS AND EQUIPMENT	MAINTENANCE CATEGORY	NOMENCLATURE	FEDERAL STOCK NUMBER	TOOL NUMBER
1	O	TOOL KIT, ELECTRONIC EQUIPMENT, TK-101G	5180-064-5178	
2	F,H	TOOL KIT, ELECTRONIC EQUIPMENT, TK-105G	5180-610-8117	
3	F,H	MULTIMETER TS-352( )/U	6625-553-0142	

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

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